The Effects of Gamified Reading Instruction on Reading Motivation and Engagement Among Upper Elementary Students

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Abstract

Reading motivation and engagement often decline as students progress through the upper elementary grades and encounter increasingly complex reading tasks. Gamification, which incorporates game-like elements such as badges, points, level, and rewards into educational activities, has emerged as a potential strategy for increasing student motivation and participation in literacy instruction. This research proposal examines the potential effects of gamified reading instruction on reading motivation and engagement among upper elementary students. Existing literature suggests that gamification can positively influence student interest, engagement, and attitudes toward reading, although limited research has focused specifically on upper elementary classroom settings. Guided by self-determination theory, this proposed study will utilize a quasi-experimental pretest-posttest control group design to compare students receiving gamified reading instruction. Approximately 100 fourth and fifth grade students from two public elementary schools will participate in the study. Data will be collected through reading motivation surveys, student engagement surveys, and classroom observations. Findings from this study may provide educators with a better understanding of how gamified instructional strategies influence reading motivation and engagement and may inform the design of more engaging literacy experiences for upper elementary students.

Introduction

Reading is one of the most important skills students develop in school, yet many upper elementary students begin to lose motivation as reading becomes more challenging and less guided. What once felt enjoyable can start to feel like a chore, and this shift affects how long

students stay focused, how much they participate, and how confident they feel as readers. Teachers often notice that students who once loved reading begin to disengage when texts become longer, vocabulary becomes more complex, and assignments require deeper comprehension. Because of this, educators continue searching for new ways to make reading meaningful and engaging. One approach that has gained increasing attention is gamification, which involves incorporating game-like elements such as points, badges, levels, and rewards to learning activities. These elements turn regular reading lessons into interactive experiences that encourage students to participate and stay involved. This proposal explores how gamified reading instruction may support motivation, engagement, and overall reading performance in upper elementary classrooms.

Technology plays a major role in today's classrooms, and many schools already use digital tools to support reading and writing. Gamified reading platforms build on these tools by incorporating game-like elements that make learning more interactive and engaging. When students can see their progress and work toward meaningful goals, they are more likely to stay focused and develop positive attitudes toward reading (Prados-Sánchez et al., 2023). Gamification can also support personalized instruction by encouraging students to monitor their own growth and celebrate achievements, helping them develop greater confidence and enjoyment in reading.

Research shows that gamification can increase students' interest and participation in literacy activities. Dinihari et al. (2024) found that gamified literacy applications increased students' intrinsic motivation and engagement, while Mohammed et al. (2024) reported that game elements such as badges and leaderboards improved student motivation. Together, these

findings suggest that gamification can positively influence both students' attitudes toward learning and their academic engagement.

Gamification also connects to how students think and feel about reading. Sur and Ünal (2024) found that students who were more engaged in reading tended to have more positive attitudes and stronger comprehension skills. Their study showed that reading attitude plays a key role in how engagement influences understanding. When students enjoy reading, they are more likely to learn effectively. This supports the idea that gamified reading can help students build positive feelings about literacy, which can lead to better academic outcomes. Gamification encourages students to view reading as an active process rather than a passive one. Instead of simply completing assignments, students interact with texts, track their progress, and reflect on their growth. As a result, gamified reading instruction not only improves motivation but also fosters collaboration and community within the classroom.

Several studies have examined gamification within reading instruction and found positive effects on student engagement and reading behaviors. Research suggests that game elements such as challenges, rewards, and progress tracking can increase participation, strengthen reading habits, and improve students' attitudes toward reading (Bjørner et al., 2022; Li & Chu, 2021; Wang et al., 2024). These findings indicate that gamified reading instruction can be adapted across various learning environments while supporting literacy development and student engagement.

The theory behind gamification connects closely to self-determination theory, which explains how different types of motivation influence behavior. This theory distinguishes between autonomous (intrinsic) motivation and controlled (extrinsic) motivation. Intrinsic motivation occurs when students read because they enjoy it or find it meaningful, while extrinsic motivation

occurs when they read for rewards, recognition, or pressure. Gamification often uses external rewards, but its success depends on whether those rewards also support internal motivation. When students earn badges or points, the goal is not just to win but to feel proud of their effort and progress. If gamified reading instruction helps students value reading for its own sake, it can strengthen intrinsic motivation and lead to deeper engagement. This connection between theory and practice is important because it demonstrates that gamification is not solely about making learning enjoyable; it is about creating conditions that foster genuine interest, persistence, and engagement in reading.

Taken together, the research suggests that gamified reading instruction can positively influence students' motivation and engagement in literacy activities. By incorporating game-like elements into reading instruction, educators may create more interactive learning experiences that encourage participation and support literacy development. As reading becomes increasingly complex in the upper elementary grades, gamification may offer a promising strategy for helping students remain engaged and invested in reading.

Although previous studies suggest that gamification can positively influence literacy outcomes, limited research has examined how gamified reading instruction affects reading motivation and engagement specifically among upper elementary students in classroom settings. The purpose of this study is to examine how gamified reading instruction influences upper elementary students' motivation and engagement. Even though many classrooms now use technology, it is still unclear which specific game elements such as points, badges, levels, or leaderboards are most effective for helping students stay interested in reading. This study aims to understand how these features shape students' attitudes toward reading and whether gamification can help them stay focused, participate more actively, and build stronger reading habits. By

learning how game-like elements affect students' experiences during reading instruction, teachers can design lessons that make reading both enjoyable and meaningful for young learners.

This study is guided by one central question: How does gamified reading instruction affect upper elementary students' reading motivation and engagement? This question will help determine whether adding game-like features to reading lessons can make students more excited to read, help them stay on task longer, and support their overall literacy development.

Review of the Literature

Brief History

Reading motivation and reading engagement have been ongoing concerns in elementary education because students' willingness to read is connected to their reading habits, comprehension, and overall literacy development. As students move into upper elementary grades, reading often becomes more independent, academic, and demanding. For this reason, teachers and researchers have looked for instructional strategies that can increase student interest, participation, and persistence in reading activities.

One approach that has gained attention is gamification. Gamification refers to the use of game-like elements in learning activities that are not games. In reading instruction, these elements may include badges, points, leaderboards, levels, rewards, progress bars, challenges, and feedback. These features are intended to make reading more interactive and goal-oriented. Instead of viewing reading only as a required academic task, students may experience reading as a challenge where they can track progress, receive feedback, and feel a sense of accomplishment.

The theory base for this topic connects to motivation theory, especially self-determination theory. Self-determination theory distinguishes between autonomous motivation and controlled motivation. Autonomous motivation is closely related to intrinsic motivation because students

read because they value reading, enjoy it, or find it meaningful. Controlled motivation is connected more to pressure, rewards, or external recognition. This distinction is important because gamification often uses external features such as badges, leaderboards, levels, and progress tracking. These features may increase participation, but it is still important to examine whether they support students' internal motivation to read.

The literature on gamification and reading suggests that game-like features can increase engagement and participation, but the strength of the evidence varies across studies. Some studies are correlational and help explain relationships among reading motivation, engagement, and comprehension. Other studies use experimental or quasi-experimental designs to test gamified learning environments. Others are descriptive and help explain student interest and classroom application. Together, these studies show what has been tried, what appears to work, what remains unclear, and how the proposed study can extend previous research.

Review

Reading Motivation and Engagement as a Foundation

Early research on reading motivation provides an important foundation for studying gamified reading instruction. De Naeghel et al. (2012) examined the relationship among elementary students' recreational and academic reading motivation, reading frequency, reading engagement, and reading comprehension from a self-determination theory perspective. The study included 1,260 Flemish fifth-grade students and 67 teachers. The researchers developed and validated the SRQ-Reading Motivation questionnaire, which measured both recreational and academic reading motivation. Their findings showed that both recreational and academic reading motivation included two motivation factors: autonomous motivation and controlled motivation. This finding is important because it shows that students may read for different reasons. Some

students may read because they enjoy or value reading, while others may read because they feel pressure or want external rewards.

The study by De Naeghel et al. (2012) used a quantitative correlational design. The researchers used exploratory and confirmatory factor analyses to examine the structure of the SRQ-Reading Motivation questionnaire. They also examined relationships among reading motivation, reading self-concept, reading behavior, and reading comprehension. This design was appropriate because the purpose of the study was to examine relationships among variables, not to test an intervention. A major strength of the study is its large sample size and attention to measurement quality. The development and validation of the SRQ-Reading Motivation questionnaire strengthens the study because it provides evidence that the instrument measured the intended motivation constructs. The sample was also appropriate because the participants were fifth-grade students, which closely aligns with an upper elementary population. However, the correlational design limits the conclusions that can be made. The study shows that reading motivation, reading behavior, and comprehension are related, but it cannot prove that one variable causes another. The study also did not examine gamification. The proposed study extends this work by applying reading motivation theory to a gamified reading intervention and examining whether gamified reading challenges affect reading stamina and intrinsic motivation.

Sur and Ünal (2024) also examined important relationships among reading variables. Their study investigated the mediating role of reading attitude in the relationship between elementary students' reading engagement and reading comprehension. The study used data from 491 students in the Central Anatolia region of Turkey. The researchers used the Reading Success Scale, Reading Engagement Scale, and Reading Attitude Scale. Their findings showed that reading engagement had a significant positive effect on reading comprehension and reading

attitude. However, reading attitude did not have a significant direct effect on reading comprehension. The study also found that reading engagement explained approximately 21% of the variation in reading attitude.

Sur and Ünal (2024) used a descriptive survey model with mediation analysis. This design was appropriate because the researchers wanted to examine relationships among reading engagement, reading attitude, and reading comprehension. The study is useful because it supports the importance of reading engagement as a variable connected to reading outcomes. A strength of the study is its use of three reading-related scales, which helped the researchers measure reading success, engagement, and attitude. The sample size of 491 students also makes the findings stronger than a small classroom-based sample. However, because the study was not an intervention study, it cannot show whether a specific instructional strategy improves reading engagement or comprehension. The study also does not examine gamification. As with the study by De Naeghel et al. (2012), the proposed study also extends Sur and Ünal's research by testing a specific instructional strategy, gamified reading challenges, and examining whether that strategy affects reading stamina and intrinsic motivation.

Game-Based Reading Activities

Research on game-based reading activities provides a more direct connection to the proposed study. Bjørner et al. (2022) investigated whether game-based learning could increase reading engagement during homework activities. The study involved 42 students from two Danish gymnasium classes, with 27 students in the experimental class. The game-based learning activity was connected to reading sections of Herodotus' The Histories. The researchers concluded that game-based learning could increase students' engagement and motivation to complete reading homework.

Bjørner et al. (2022) used an intervention-based design with an experimental class. This design was appropriate because the researchers were testing whether game-based learning could improve reading engagement in a real educational setting. A strength of the study is that it focused directly on reading engagement instead of general academic engagement. It also tested a practical instructional strategy rather than only discussing gamification in theory. However, several limitations affect the trustworthiness and usefulness of the findings for the proposed study. The sample was small, and the participants were gymnasium students, not upper elementary students. The setting was also homework, which may involve different levels of student independence, parent support, and teacher guidance than a classroom reading block. Because of these differences, the study is useful as support for game-based reading engagement, but its findings cannot be directly generalized to upper elementary reading instruction. The proposed study extends Bjørner et al.'s work by focusing on upper elementary students, classroom reading blocks, reading stamina, self-reported intrinsic motivation, and number of completed texts.

Gamification Technology and Motivation

Dinihari et al. (2024) focused more directly on elementary literacy. Their study examined how gamification technology could generate interest in literacy among elementary school students. The study focused on fifth-grade students and used surveys and observations to identify students' needs and preferences. Based on the findings, the researchers designed a gamification platform that combined game elements with literacy material aligned with the curriculum. The findings suggest that gamification technology can support student interest in literacy activities and create a more engaging literacy environment.

Dinihari et al. (2024) used a descriptive qualitative design. This design was appropriate because the study explored students' needs, preferences, and responses to gamification technology. A strength of the study is that it focused on fifth-grade students, which closely matches the proposed study's upper elementary population. The use of both surveys and observations also provided more than one source of data about students' literacy interests. However, the descriptive qualitative design limits the ability to make causal claims. The study can describe student interest and response to gamification, but it cannot prove that gamification caused higher reading motivation or reading stamina. In addition, the study focused on literacy broadly, including reading, writing, and listening, rather than reading stamina specifically. The proposed study extends Dinihari et al.'s work by narrowing the focus to reading instruction and using a quasi-experimental comparison between a gamified reading block and a traditional reading block.

Mohammed et al. (2024) examined specific gamification features in an elementary school setting. Their study investigated the effects of gamification on elementary students' motivation through an action research field experiment. The researchers compared badges and leaderboards in a gamified digital learning environment. The study involved 30 fifth-grade students in Egypt divided into two experimental groups: one group used badges, and the other group used leaderboards. The content focused on the circulatory system, and the researchers measured cognitive motivation and achievement motivation. The findings showed increases in motivation in both experimental groups, but there were no significant differences between the badge group and the leaderboard group.

Mohammed et al. (2024) used an action research field experiment. This design was useful because the researchers tested gamification in a real elementary school setting while comparing

two specific game elements. A strength of the study is that it does not treat gamification as one broad concept. Instead, it examines badges and leaderboards separately, which is important because the proposed study also focuses on specific game elements such as badges, levels, and progress bars. However, the small sample size of 30 students limits generalizability. Another limitation is that the study focused on science content rather than reading instruction. The motivation outcomes were cognitive motivation and achievement motivation, not intrinsic reading motivation. The finding that both groups improved but did not differ significantly also raises an important question: the overall gamified environment may have mattered more than the specific game element used.

Gamified Reading Instruction and Reading Outcomes

Li and Chu (2021) provide one of the strongest connections between gamification and children's reading. Their mixed-method study examined the effects of gamification pedagogy through an online gamified reading platform. The study explored academic performance, reading-related motivation, reading habits, reading behavior, and sustainability. The article included three sub-studies that examined how students engaged with the gamified reading platform and whether the effects were sustained over time. The findings suggested that deep engagement in the gamified platform supported students' reading motivation and reading abilities. The study also explored whether these effects continued beyond the initial use of the platform.

Li and Chu (2021) used a mixed-method design. This design was appropriate because the researchers examined both measurable outcomes and participant perceptions. A major strength of the study is that it focused directly on gamification and children's reading, making it highly relevant to the proposed research. The use of multiple sub-studies also strengthened the research

because it allowed the authors to examine immediate effects and sustainability. This is important because gamified tools may be exciting at first, but they may not continue to support motivation after the novelty wears off. However, one limitation is that the study focused on an online platform. This may not fully apply to classrooms that use non-digital gamification tools such as paper badges, classroom levels, or progress charts. Another limitation is that students who engaged deeply with the online platform may have already been more motivated readers. The proposed study extends Li and Chu's work by focusing on upper elementary classroom reading blocks and by measuring reading stamina, intrinsic motivation, and completed texts.

Prados Sánchez et al. (2023) also examined gamification in primary reading instruction. Their study evaluated the impact of a gamified platform on reading comprehension and attitudes toward reading in primary education. The study used a quasi-experimental design with 85 fourth-grade students. The researchers examined whether use of a gamified platform influenced students' reading comprehension and reading attitudes. This study is highly relevant because it focuses specifically on reading, primary students, and gamification.

The quasi-experimental design used by Prados Sánchez et al. (2023) is a strength because it allowed the researchers to compare outcomes in a realistic educational setting. This design is also similar to the proposed study's planned design. The study is useful because it measured both a skill-based outcome, reading comprehension, and an affective outcome, attitudes toward reading. However, the sample size of 85 students limits how broadly the findings can be generalized. Another limitation is that the study focused on reading comprehension and reading attitudes, but not reading stamina. The study also used a gamified platform, while the proposed study may use gamified challenges that could be digital or non-digital. The proposed study extends Prados Sánchez et al.'s work by examining whether gamified reading challenges affect

how long students stay on task, how intrinsically motivated they feel, and how many texts they complete.

Strengths and Limitations Across the Literature

Taken together, the research suggests that gamification may be a useful strategy for improving engagement and motivation, but the evidence is still developing. De Naeghel et al. (2012) and Sur and Ünal (2024) show that motivation, engagement, attitude, and comprehension are important reading variables. However, these studies are not intervention studies and do not test gamification. Bjørner et al. (2022), Dinihari et al. (2024), Mohammed et al. (2024), Li and Chu (2021), and Prados Sánchez et al. (2023) provide support for gamification or game-based instruction, but they vary in population, setting, subject area, and outcomes. Some studies focus on older students, some focus on broad literacy or science, and some rely on digital platforms that may not match everyday classroom reading blocks.

The literature also shows that gamification does not automatically solve all motivational problems. Badges, leaderboards, and progress tracking may increase participation, but they may also encourage students to focus on external rewards. This matters because the proposed study is focused on intrinsic motivation, not only participation. In addition, several studies examine reading comprehension, reading attitude, general engagement, or platform participation, but fewer directly examine reading stamina.

Gap in the Literature and Connection to the Proposed Study

The proposed study addresses these gaps by focusing specifically on upper elementary students and comparing a gamified reading block with a traditional reading block. It also extends previous research by examining three outcomes: reading stamina, self-reported intrinsic motivation, and number of completed texts. Therefore, the research question guiding this

proposed study is: How does gamification in reading instruction affect reading motivation and engagement among upper elementary students?

Proposed Method

Purpose

The purpose of this study is to investigate how gamified reading instruction affects reading motivation and engagement among upper elementary students. More specifically, this study seeks to determine whether students participating in gamified reading programs demonstrate increased motivation to read and higher levels of engagement compared to students receiving traditional teacher-led reading instruction using print based texts.

Paradigm

For this study, we will follow a post-positivist paradigm, assuming that reality can be measured objectively while also acknowledging that some observations may be influenced by contextual factors. This approach is appropriate because this study aims to analyze measurable relationships between student outcomes and gamified instruction through quantitative methods.

Study Design

For this study, we will employ a quasi-experimental pretest-posttest control group design. Two groups will participate. The first group of students will serve as the experimental group and receive gamified instruction. The second group of students will serve as the control group and receive traditional reading instruction. A quasi-experimental design is appropriate because existing classroom groups will be used rather than randomly assigning students to treatment conditions.

Population and Sample

The target population of this study will be upper elementary students, specifically students in grades 4 and 5 who are enrolled in public schools. A sample of approximately 100 students from two comparable elementary schools will be selected. One group will serve as the control group while the other will serve as the experimental group.

Inclusion criteria will include fourth and fifth grade students enrolled in general education reading classes who receive parental consent and provide student assent. Exclusion criteria will include students who enrolled in self contained special education classrooms and students who are unable to participate consistently due to extended absence during the intervention period.

Investigative Techniques

This study will use quantitative research techniques to measure changes in reading motivation and engagement over an eight week time period. Data will be collected through surveys and observational measures before and after the implementation of gamified reading intervention.

The intervention will incorporate the following game-based elements:

- Reading challenges
- Progress tracking
- Achievement badges
- Points and scoring systems
- Rewards and recognition

Variables

Independent Variable

- Type of reading instruction (gamified reading instruction versus traditional reading instruction)

Dependent Variables

- Reading motivation
- Reading engagement

Control Variables

- Grade level
- Length of intervention
- Reading curriculum
- Amount of instructional time

Instrumentation

Reading Motivation Survey

The Motivation for Reading Questionnaire (MRQ) will be used to assess students' motivation to read. The MRQ has been widely used in literacy research and has demonstrated acceptable reliability and validity for measuring elementary students' reading motivation.

Student Engagement Survey

This standardized survey will measure emotional, behavioral, and cognitive engagement during reading instruction and activities. A validated instrument with established reliability coefficients will be selected to ensure accurate measurement of student engagement.

Demographic Questionnaire

Basic demographic information such as gender, age, grade level, and English language learner status will be collected.

Classroom Observation Checklist

Observations will be recorded to document student participation, attention, enthusiasm during reading instruction, and task completion. Observers will be trained using a standardized protocol to improve consistency, and inter-rater reliability procedures will be implemented prior to data collection.

Data Collection Procedures

Data collection will happen across four phases before, during, and after the experiment.

I. Phase 1: Pre-Intervention

During this phase, we will obtain parental consent and student assent, administer pretest surveys measuring reading motivation and engagement, and establish baseline classroom observations.

II. Phase 2: Intervention

During this phase, the experimental group will participate in gamified reading instruction while the control group receives traditional teacher-led reading instruction. Periodic classroom observations will be conducted throughout the intervention period to monitor engagement and implement fidelity.

III. Phase 3: Post-Intervention

Researchers will administer posttest surveys and conduct final classroom observations to measure changes in motivation and engagement.

IV. Phase 4: Data Organization

Survey responses and observational data will be compiled, coded, and prepared for statistical analysis.

Data Analysis Plan

Quantitative data will be analyzed using statistical software such as SPSS. Descriptive statistics, including means, standard deviations, and frequencies, will be calculated for all variables. Paired samples t-tests will be used to examine changes in motivation and engagement from pretest to posttest within each group. Independent samples t-tests will be conducted to compare posttest scores between the experimental and control groups. Statistical significance will be evaluated at the .05 level.

Hypothesis

Students who participate in gamified reading instruction will demonstrate significantly higher levels of reading motivation and engagement than students who participate in traditional reading instruction.

Ethical Considerations

During this study, all participant information and collected data will be kept confidential and securely stored. Participation will be voluntary, and participants may withdraw from the study at any time without penalty.

Bias

Potential biases include the following:

I. **Researcher Bias**

Researchers' expectations regarding the effectiveness of reading gamification may influence data interpretation.

II. **Selection Bias**

Groups may differ because the participants are not randomly assigned to treatment conditions.

III. Observer Bias

Observations may unintentionally record behaviors differently across groups. To minimize this bias, observation instruments, procedures, and analysis methods will be clearly defined and consistently applied.

Assumptions

This study assumes that students answer survey questions honestly, teachers implement instructional methods with fidelity, students attend school regularly, gamified instruction is implemented consistently, and the instruments used accurately measure reading motivation and engagement.

Limitations

There are several possible limitations to this study. Because participants are not randomly assigned to groups, the study cannot establish causal relationships with the same level of confidence as a true experimental design. The eight week intervention period may not be long enough to capture long-term effects. Survey responses may be influenced by social desirability bias. Differences in teacher implementation may affect outcomes. Additionally, findings may not be generalizable to all fourth and fifth grade students, and the sample may not be representative of all upper elementary populations.

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