

Lectura Maestra: Gamified Reading Strategy in Undergraduate Business Education

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Abstract: Assigned readings are central to knowledge acquisition in higher education, yet students do not always complete or adequately comprehend them. This study examines *Lectura Maestra*, a gamified reading strategy developed at Tecnologico de Monterrey for undergraduate business education. The intervention combined five mandatory book-chapter readings, weekly Kahoot challenges, a narrative metaphor inspired by *The Queen's Gambit*, an individual leaderboard, badge progression, and bonus points linked to cumulative performance. The study was designed as an exploratory comparative classroom study using non-equivalent intact cohorts. Seven course groups taught between 2024 and 2026 documented the instructional development from a final-exam-only approach, to two reading quizzes plus a final exam, and finally to *Lectura Maestra*. Groups 1-5 were used as descriptive developmental context. The principal statistical comparison involved two different second-semester cohorts enrolled in consecutive modules of the same curricular unit in 2026. Group 6 completed Ideation with *Lectura Maestra* (n=27), whereas Group 7 completed Prototyping with a final-exam-only approach (n=26). Because the cohorts studied different modules and were not randomly assigned, the comparison was interpreted as exploratory rather than causal. Final examination scores were calculated exclusively from correct answers and excluded the speed-weighted points and bonus points used during the gamified rounds. The *Lectura Maestra* cohort achieved a higher mean final exam score than the comparison cohort (77.37 versus 67.12), a difference of 10.25 points. Welch's t-test identified a statistically significant difference, $t(37.73)=2.67$, $p=0.011$, with a moderate-to-large effect size (Cohen's $d=0.74$). However, the different subject content and intact-cohort design prevent attributing the difference exclusively to gamification. The findings provide exploratory evidence that a structured gamified reading design may support stronger reading-based academic performance. *Lectura Maestra* offers a practical model for organizing repeated reading accountability, visible progression, and assessment-linked incentives in undergraduate business education. Further research should replicate the intervention with equivalent course content, multiple instructors, and complementary qualitative and longitudinal measures.

Keywords: Gamification, Educational innovation, Academic performance, Reading assessment, Business education

1. Introduction

Assigned reading is an important component of university learning, but completing an assigned text does not necessarily guarantee adequate comprehension. Research has documented low or inconsistent reading compliance among undergraduate students and has shown that reading preparation may be associated with subsequent examination performance (Sappington, Kinsey and Munsayac, 2002; Hoeft, 2012). Task-oriented reading research also emphasizes the need to align reading objectives, strategies, and assessment so that students understand how assigned texts contribute to course outcomes (Ritchey and List, 2022). This challenge is especially relevant in undergraduate business education, where reading competes with projects, assignments, and applied learning activities.

Gamification has emerged as one possible strategy for structuring academic tasks in conventional learning environments. It is commonly defined as the use of game design elements in non-game contexts and may include points, badges, leaderboards, levels, and challenge structures (Deterding et al., 2011; Kapp, 2012). Empirical reviews indicate that outcomes vary according to context, duration, and the alignment between game elements and instructional goals (Hamari, Koivisto and Sarsa, 2014; Dicheva et al., 2015; Dichev and Dicheva, 2017; Subhash and Cudney, 2018). Accordingly, gamification should be evaluated through the specific learning outcome it is intended to support rather than assumed to be effective by itself.

At Tecnologico de Monterrey, an update to the Tec21 model required undergraduate courses to include an explicit Exam component for knowledge assessment in addition to competency-based evidence of learning. This change increased the need to ensure that students adequately processed assigned readings, which were a key source of conceptual knowledge. An initial final-exam-only approach produced an unsatisfactory group average. Two intermediate reading quizzes were subsequently introduced, and formal faculty training in gamification later informed the development of *Lectura Maestra*.

Lectura Maestra is a five-week gamified reading strategy that combines one mandatory book chapter and one Kahoot challenge per week, badge progression, an individual leaderboard, and bonus points. *The Queen's Gambit* was used exclusively as a narrative metaphor for disciplined preparation, strategic thinking, and progressive mastery; chess was not course content.

This paper describes the development of *Lectura Maestra* and examines whether the cohort exposed to the strategy obtained different final exam results from a contemporary comparison cohort. Because the groups were intact cohorts, completed different modules, and were not randomly assigned, the statistical comparison is exploratory and does not establish causality.

2. Literature Review

Gamification incorporates selected game design elements into conventional activities rather than replacing instruction with a complete game (Deterding et al., 2011). This distinction is central to the present study: *Lectura Maestra* retained the official course structure and used points, badges, rankings, repeated challenges, and a narrative frame to organize reading assessment. Kapp (2012) argues that the educational value of such elements depends on whether they support attention, feedback, persistence, and goal-directed behavior rather than functioning as decorative rewards.

Evidence regarding educational gamification is promising but mixed. Hamari, Koivisto and Sarsa (2014) found positive effects in many empirical studies, while also emphasizing contextual variation. Dicheva et al. (2015) and Dichev and Dicheva (2017) similarly observed that interventions differ in duration, theoretical grounding, and methodological quality. In higher education, Subhash and Cudney (2018) reported potential benefits for participation and academic outcomes but stressed that effects depend on instructional alignment. Dominguez et al. (2013) also found that gamified designs may improve some performance dimensions without improving all learning outcomes.

Progression and assessment transparency are particularly relevant to *Lectura Maestra*. Sindre and Kolas (2025) argue that visible levels and transparent assessment structures can operate as meaningful forms of gamification in higher education. Such systems may make cumulative academic work more legible by connecting repeated performance with advancement. In the present strategy, progression was represented by badge levels and a leaderboard, while the principal measured outcome remained final exam accuracy.

The reading problem addressed by the intervention is distinct from gamification itself. Sappington, Kinsey and Munsayac (2002) documented inconsistent reading compliance among college students, and Hoeft (2012) examined reasons students do not complete assigned readings and instructional responses that may increase compliance. Ritchey and List (2022) propose a task-oriented framework in which reading purposes, strategies, and assessments are explicitly aligned. Together, these studies support the need for structured reading accountability and for measuring comprehension rather than assuming that assigning a text ensures learning.

Narrative framing can provide coherence to repeated instructional activities. Gee (2003) associates game-informed learning with identity, progression, and situated meaning, while Hunicke, LeBlanc and Zubek (2004) distinguish the mechanics, dynamics, and experiential dimensions of design. In *Lectura Maestra*, *The Queen's Gambit* metaphor connected reading with disciplined preparation and informed decision-making. The present study did not measure motivation or engagement; its contribution is limited to describing the design and reporting an exploratory comparison of reading-based final exam performance.

The literature therefore supports three premises: gamification requires instructional coherence; reading compliance and comprehension require deliberate scaffolding; and performance effects should be evaluated cautiously under the conditions in which an intervention is implemented. This study contributes applied evidence from a Latin American undergraduate business context while explicitly acknowledging the limits of its non-equivalent cohort comparison.

3. Methodology

3.1 Research Design

This study used an exploratory comparative classroom design with non-equivalent intact cohorts. Groups 1-5 document the instructional development that preceded *Lectura Maestra*: an initial final-exam-only approach was followed by two reading quizzes and later by a fully gamified reading strategy. These historical groups provide descriptive developmental context and are not treated as equivalent experimental conditions.

The principal exploratory comparison involved two second-semester cohorts from 2026. Group 6 completed Ideation with *Lectura Maestra*, whereas Group 7 completed Prototyping with a final-exam-only reading assessment approach. The cohorts were not randomly assigned and studied different modules. The analysis was therefore intended to identify a performance association rather than establish that gamification caused the observed difference.

The study was not framed as Design-Based Research because it did not prospectively follow a formal DBR protocol involving planned design cycles, iterative data collection, and the generation of transferable design principles. The intervention nevertheless emerged from an iterative process of classroom-based pedagogical improvement.

3.2 Research Setting and Participants

The study was conducted at Tecnológico de Monterrey, Campus Laguna, School of Business, Mexico. The dataset included 153 undergraduate students from seven face-to-face, five-week groups taught between 2024 and 2026. All reported final examination results corresponded to modules taught and assessed by the author. Students ranged from first to eighth semester across the developmental dataset.

The principal comparison involved two different second-semester cohorts enrolled in consecutive modules of the same curricular unit. In Group 6, the author taught Ideation and implemented *Lectura Maestra*; Prototyping was subsequently taught by another instructor. In Group 7, another instructor taught Ideation, after which the author taught Prototyping without *Lectura Maestra*.

Ideation focused on identifying market opportunities, analyzing trends and business-model environments, developing value propositions, applying ideation techniques, and validating potential solutions. Prototyping focused on defining solution characteristics, developing physical, digital, or service prototypes, testing them in context, and communicating their value through storytelling. Although both modules belonged to the same curricular unit and institutional format, their different subject matter represents a potential confounding factor.

3.3 Instructional Development

Three reading-assessment approaches were implemented sequentially: Final Exam Only, in which mandatory readings were assessed only through a final knowledge examination; Two Quizzes and Final Exam, in which two intermediate reading quizzes were added; and Gamification and Final Exam, in which students completed five weekly *Lectura Maestra* rounds before the final examination.

Groups 1-5 are included to explain why the instructor progressively redesigned the reading-assessment approach. They are not used to establish causal differences among the three strategies. In addition to reading assessments, students completed the academic activities formally established in the institutional design of each module. These activities varied according to module learning objectives and were not included as outcome variables.

3.4 Reading Materials and Assessment Instruments

The assigned materials consisted of five mandatory book chapters, one per week. Students accessed the chapters directly through their individual Kindle Unlimited subscriptions.

The five weekly rounds were administered through Kahoot. Kahoot's standard points system, which considers both answer accuracy and response speed, was used only to establish the weekly ranking, cumulative *Lectura Maestra* points, badges, and bonus points. No formal student feedback about perceived fairness of speed-weighted ranking was collected.

Final examinations were administered individually in class through Kahoot and included at least 25 timed, closed-book, multiple-choice questions. Final exam grades were calculated exclusively from the proportion of correct answers. They excluded Kahoot's speed-weighted scoring and all bonus points earned during the gamified rounds.

The instructor uploaded the assigned chapter content to Kahoot's artificial-intelligence quiz-generation feature and consistently selected the intermediate skill level to produce draft questions. No student personal data were uploaded. All AI-generated questions were reviewed and edited by the instructor before classroom use. The examinations were not identical across modules but followed the same generation and review procedure to support comparable conceptual difficulty.

3.5 Privacy and Data

During the weekly Kahoot rounds, students used only their first names or self-selected pseudonyms. The cumulative leaderboard displayed full names but was shown exclusively during class to students enrolled in the group. It was not published, distributed outside the course, or incorporated into the research dataset. Future implementations will use pseudonyms in both environments.

The analysis used institutionally authorized, anonymized course assessment records. The dependent variable was final examination accuracy on a 0-100 scale. The grouping variable was exposure or non-exposure to *Lectura Maestra*. No personally identifiable information was included in the analysis or manuscript.

3.6 Statistical Analysis

The primary exploratory comparison examined the difference in final exam means between Group 6 and Group 7. Welch's independent-samples t-test was selected because the groups had unequal standard deviations. Cohen's d was calculated to estimate the standardized magnitude of the difference.

Statistical significance and effect size were interpreted together. Because the intact cohorts completed different modules and were not randomly assigned, the result was not interpreted as evidence that gamification exclusively caused the difference.

3.7 Methodological Limitations

The cohorts were not randomly assigned, the principal comparison involved different academic modules, and the examinations were equivalent in procedure rather than identical in content. The author taught and assessed the analyzed module in both cohorts, but the other module was taught by different instructors. The study did not collect qualitative feedback, direct reading-behavior measures, motivation measures, or delayed retention data.

These conditions limit causal inference and mean that module content, cohort characteristics, or prior instructional experiences may partly explain the observed difference. The study should therefore be understood as exploratory evidence from a real classroom setting. The study also did not undertake a legal analysis of licensing conditions associated with AI-assisted processing of subscription-based chapter content.

4. The Lectura Maestra Intervention

Lectura Maestra was designed to organize five mandatory readings as a cumulative, visible progression rather than as isolated preparation for a final examination. Its pedagogical expression was 'read better, think better, decide better.' The intervention supplemented, rather than replaced, the official academic activities of the Ideation module.

Students completed one book chapter and one in-class Kahoot challenge during each of the five course weeks. The five quizzes therefore functioned as mid-course interventions and provided repeated reading accountability before the final examination.

The Queen's Gambit was used exclusively as a narrative metaphor and not as chess-related course content. The official Netflix trailer provided the visual basis for an instructor-produced version with Spanish subtitles. The script associated careful reading with disciplined preparation, conceptual comprehension, strategic thinking, and informed decision-making. It emphasized that knowledge is built through study and understanding rather than speed or improvisation. The video was shown at the beginning of the module and again after the second round.

Within this metaphor, 'reading the board before making a move' represented acquiring sufficient conceptual knowledge before generating an idea, evaluating a solution, solving a problem, or making an academic or professional decision. Each assigned chapter represented a round, each Kahoot was a conceptual challenge, and cumulative performance represented progressive mastery.

For each weekly round, the highest Kahoot score was normalized to 100 points, and the remaining scores were adjusted proportionally. A minimum of 35 points were assigned for participation. These round scores included Kahoot's speed component and were used only within the gamification system. They did not determine the final exam result analyzed in this study.

Cumulative points determined nine badge levels, from Beginner to Legend, and the individual leaderboard was displayed after each round. Bonus points ranged from 0 to 15 and were applied to the course component with the highest grading weight. The final examination scores used for statistical analysis excluded these bonus points.

Table 1: Lectura Maestra badge progression and bonus points

Badge level	Point range	Bonus points
Beginner	0–74	0
Intermediate	75–149	1
Advanced	150–224	2
Candidate Master	225–299	3
Master	300–374	5
International Master	375–449	7
Grandmaster	450–474	9
Super Grandmaster	475–499	11
Legend	500	15

Taken together, the intervention combined mandatory weekly readings, repeated conceptual challenges, narrative framing, badge progression, an individual leaderboard, and assessment-linked bonus points. Its purpose was to create a structured reading system rather than to replace the official course design with a game.

5. Results

5.1 Developmental Descriptive Context

Table 2 presents the seven groups and documents the sequence of instructional adjustments implemented between 2024 and 2026. Groups 1-5 provide descriptive context for the development of *Lectura Maestra*. Because they differed in subject, academic level, semester, and sample size, their scores were not interpreted as equivalent treatment comparisons.

The historical results nevertheless informed the instructor's pedagogical decisions. The low mean obtained in the initial final-exam-only group led to the addition of intermediate reading quizzes. Subsequent results and faculty training motivated a more structured gamified intervention. These groups therefore explain the origin and evolution of the design rather than provide causal evidence of its effectiveness.

Table 2: Overview of course groups, instructional strategies, and descriptive statistics

Group	Year	Subject	Strategy	n	Mean	SD
1	2024	Business Management	Final Exam Only	38	44.26	21.99
2	2025	Multicultural Leadership	Final Exam Only	5	60.00	12.65
3	2025	Family Bus. Institutionalization	Two Quizzes and Final Exam	14	74.14	7.25
4	2025	Strategic Human Capital Mgmt.	Two Quizzes and Final Exam	29	63.45	7.44
5	2025	Business Platforms	Two Quizzes and Final Exam	14	68.14	7.97
6	2026	Ideation	Gamification and Final Exam	27	77.37	9.23
7	2026	Prototyping	Final Exam Only	26	67.12	17.39

5.2 Exploratory Comparison Between Group 6 and Group 7

The exploratory comparison involved two second-semester cohorts enrolled in consecutive modules of the same curricular unit. Group 6 completed Ideation with *Lectura Maestra* and obtained a mean final exam score of 77.37 ($n=27$, $SD=9.23$). Group 7 completed Prototyping using a final-exam-only reading assessment approach and obtained a mean of 67.12 ($n=26$, $SD=17.39$). The observed difference was 10.25 points.

Welch's t-test indicated a statistically significant difference between the cohorts, $t(37.73)=2.67$, $p=0.011$. Cohen's d was 0.74, corresponding to a moderate-to-large standardized difference.

The analyzed scores were based exclusively on correct final exam answers and excluded speed-weighted Kahoot points and gamification bonus points. Nevertheless, because the cohorts completed different modules and were not randomly assigned, the observed difference cannot be attributed exclusively to *Lectura Maestra*. The result is interpreted as exploratory evidence of an association between the gamified reading design and higher final exam performance.

Table 3: Exploratory comparison between Group 6 and Group 7

Group	Module and Strategy	n	Mean	SD
6	Ideation: Gamification and Final Exam	27	77.37	9.23
7	Prototyping: Final Exam Only	26	67.12	17.39

6. Discussion

The cohort that completed Ideation with *Lectura Maestra* obtained a higher mean final exam score than the cohort that completed Prototyping under a final-exam-only reading assessment approach. The difference was statistically significant and the standardized effect was moderate to large. However, the result must be interpreted as an association rather than as evidence that gamification exclusively caused the difference, because the cohorts were not randomly assigned and completed different modules.

The historical groups explain the instructional problem and the sequence of redesign decisions that preceded *Lectura Maestra*. They do not constitute equivalent experimental conditions. The initial low result under a final-exam-only approach led to intermediate quizzes, while later results and faculty training informed the five-round gamified design. This developmental history is pedagogically relevant, but differences in subjects, cohorts, academic levels, and sample sizes prevent causal comparisons across the three approaches.

Several features of *Lectura Maestra* may plausibly support reading preparation. Each book chapter was followed by an immediate conceptual challenge, so students encountered repeated rather than exclusively end-of-course accountability. The badge structure and leaderboard made cumulative performance visible, while the bonus system connected weekly work with formal assessment. These features align with literature emphasizing instructional coherence and transparent progression (Kapp, 2012; Dichev and Dicheva, 2017; Sindre and Kolas, 2025). Nevertheless, the study did not directly measure reading behavior, motivation, or student perceptions, so these mechanisms remain interpretations to be tested rather than demonstrated effects.

The narrative metaphor also served a specific instructional function. *The Queen's Gambit* was not introduced as entertainment or chess content. The adapted video framed careful reading as preparation before an academic or professional decision. The phrase 'reading the board before making a move' represented acquiring sufficient conceptual knowledge before generating an idea, evaluating a solution, or acting on a problem. This clarification strengthens the relationship between the narrative and the learning purpose without claiming that the narrative itself produced the observed score difference.

The study contributes an applied model for reading assessment in undergraduate business education and reports an objective cognitive outcome rather than relying only on self-reported impressions. It also contributes evidence from a Latin American institutional context. Its principal limitation is comparability: Ideation and Prototyping were consecutive modules in the same curricular unit, but their content, assigned chapters, and other instructors differed. Module characteristics, cohort composition, or prior instructional experiences may therefore partly explain the result.

Additional limitations concern measurement and implementation. Final examinations followed a common procedure but were not identical. No formal student feedback was collected regarding the fairness of speed-weighted weekly rankings, and no delayed retention measure was administered. Full names appeared on a leaderboard visible only to enrolled students during class; future implementations will use pseudonyms throughout. The study also did not evaluate the licensing implications of using subscription-based chapter content in an AI-assisted question-generation environment, and future implementations may use instructor-prepared summaries or materials explicitly cleared for such processing.

Despite these limitations, the findings justify further evaluation of *Lectura Maestra* under stronger comparative conditions. A future study should apply the intervention and comparison condition to equivalent course content, use a common examination, involve multiple instructors, and collect qualitative feedback, reading-behavior indicators, and delayed retention measures.

7. Conclusion

This study described *Lectura Maestra*, a five-round gamified strategy for organizing mandatory book-chapter reading in undergraduate business education. The cohort exposed to the strategy obtained a higher final exam mean than a contemporary comparison cohort, with a statistically significant difference and a moderate-to-large standardized effect.

The finding is exploratory. The cohorts completed different modules of the same curricular unit, were not randomly assigned, and had different preceding instructors. The observed difference therefore cannot be attributed exclusively to gamification. Groups 1-5 document the classroom-based sequence that led to the intervention but are not equivalent treatment groups.

The practical contribution of *Lectura Maestra* is its integration of repeated conceptual challenges, transparent progression, narrative framing, and assessment-linked incentives into an existing course design. The final examination outcome was calculated exclusively from correct responses and excluded speed-weighted weekly points and all bonus points.

Further research should replicate the strategy with equivalent content and assessments, multiple instructors, qualitative student feedback, and delayed measures of knowledge retention. Under these stronger conditions, the model's contribution to reading-based academic performance can be evaluated more conclusively.

Ethics declaration: Ethical clearance was not required for this study because of the nature of the research. The study used institutionally authorized, anonymized course assessment records.

AI declaration: The structural editing of this paper was carried out by the author. As a non-native speaker of English, he used ChatGPT and Grammarly for translation, stylistic editing, and orthotypographic editing. The author is fully responsible for the final text.

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