

Using Gamified Activity-Based Learning to Transform Classroom Dynamics from Pedagogy to Heutagogy

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ABSTRACT

This research study, which is both conceptual and design-oriented, contends that the incorporation of gamified activity-based learning (GABL) rooted in heutagogical principles can transform classroom dynamics from a teacher-centered transmission model to a learner-centered capability development approach. This paper, grounded in heutagogy (self-determined learning), self-determination theory, and gamification literature, (1) delineates a theoretical framework that aligns heutagogical constructs (autonomy, capability, double-loop learning, reflection) with gamified activity design; (2) proposes a design-based research (DBR) intervention for language and classroom environments; and (3) details data collection and analysis strategies, expected outcomes, and practical implications. The method emphasizes learner autonomy, collaborative evaluation, continuous reflection, and contextual game components to promote enduring engagement, metacognition, and transferable skills. The implications for teacher education, curriculum development, and future empirical research are examined.

Keywords: Heutagogy, gamification, activity-based learning, learner autonomy, design-based research, self-determination

INTRODUCTION

Conventional educational models prioritize instructor guidance and fixed learning objectives; heutagogy redefines learning as a learner-centered process centered on competence and autonomy (Hase & Kenyon, 2000; Blaschke, 2012). Simultaneously, gamification—the implementation of game design features in non-gaming contexts—has been extensively utilized to enhance motivation and engagement (Deterding et al., 2011; Kapp, 2012). This study integrates these elements: it posits that gamified activity-based learning (GABL), specifically designed from a heutagogical perspective, can revolutionize classroom dynamics by enabling learners to establish goals, make decisions, engage in profound reflection, and cultivate transferable skills. The primary study objective is to develop and examine GABL interventions that implement heutagogical principles, posing the question: How may gamified, activity-based learning be structured to facilitate heutagogy in classroom environments, and what transformations in classroom dynamics and learner competencies can be anticipated?

LITERATURE REVIEW

Heutagogy: from andragogy to self-determined learning

Heutagogy originated as an outgrowth of adult learning theory (andragogy) and focuses on self-directed learning, wherein learners take initiative, establish their own learning trajectories, and cultivate capabilities rather than merely acquiring competence (Hase & Kenyon, 2000). Essential heutagogical constructs encompass learner autonomy, capacity (the ability to apply knowledge in novel circumstances), double-loop learning (reflection on underlying assumptions), and non-linear, self-directed learning trajectories (Blaschke, 2012).

Gamification and learning

Gamification utilizes game design components—points, badges, leaderboards, challenges, narratives—to enhance motivation and deliver organized feedback (Deterding et al., 2011). When strategically integrated with

pedagogy, gamification can facilitate practice, deliver fast feedback, and foster significant engagement (Kapp, 2012; Gee, 2003). Critics caution that superficial gamification (extrinsic rewards) may diminish intrinsic motivation unless it is congruent with learners' autonomy and objectives (Deci & Ryan, 2000).

Activity-based learning and constructivist alignment

Activity-based learning situates learning in authentic tasks that require active problem-solving, collaboration, and reflection (Biggs & Tang, 2011). When activities are learner-centred, they support constructivist processes and help learners build transferable skills.

Theoretical integration: heutagogy vs gamification

Integrating heutagogy with gamification necessitates the alignment of game features to foster autonomy, competence, and relatedness—the fundamental requirements of self-determination theory (Deci & Ryan, 2000)—while emphasizing capability and reflective practice (Blaschke, 2012). Narrative quests, choice-driven challenge frameworks, and structured reflection intervals can facilitate double-loop learning and knowledge transfer. It is essential that gamification should not diminish learning to mere extrinsic reward systems; rather, it should empower learners to collaboratively establish objectives, choose challenges, and contemplate strategies.

Research design and methodology

Approach: Design-Based Research (DBR)

Design-Based Research (DBR) is suitable for the iterative design and examination of educational interventions within authentic contexts (Reeves, 2006). The proposed study employs several DBR cycles in educational environments (language or general higher-education courses) to create, implement, observe, and revise GABL modules based on heutagogical concepts.

Research questions

1. In what manner can gamified activity-based modules be developed to implement essential heutagogical principles (autonomy, capability, double-loop learning)?
2. What alterations in classroom dynamics (teacher role, learner interactions, participation patterns) transpire following the implementation of GABL?
3. In what manner does interaction with GABL affect learners' perceived autonomy, self-efficacy, reflective practice, and the application of learning to new tasks?

Participants and context

Two to four undergraduate courses (20–30 students each) in a university setting over one academic semester. Mix of disciplines is possible; initial piloting in language learning classrooms is recommended because of activity-rich affordances (e.g., role-plays, simulations).

Intervention: GABL module design principles

Each GABL module (about 3–4 weeks) adheres to these design principles:

- **Learner autonomy and collaborative goal-setting:** Learners articulate learning objectives and choose challenge pathways (quests) that correspond with course outcomes. Heutagogy: autonomy; Self-Determination Theory: autonomy/support.
- **Engaging framework with significant mechanics:** Implement narrative quests, divergent difficulties, badges as indicators of competence (rather than just scores), and cooperative missions necessitating peer bargaining. Gamification connected with competency and relatedness.

- **Authenticity of activities:** Tasks replicate real-world events to facilitate transfer (e.g., community interviews, simulated negotiations).
- **Reflection checkpoints and double-loop tasks:** Consistent reflective cues stimulate learners to scrutinize their assumptions and strategies (journals, peer debriefs).
- **Learner-centered assessment:** Collaborative rubrics and peer/self-assessment fostered metacognition and accountability.
- **Facilitation supersedes instruction:** The instructor functions as a coach, curator of challenges, and provider of feedback, rather than the exclusive source of knowledge (Hase & Kenyon, 2000).

A sample module (Language classroom): learners select from three tracks— “Community Journalist” (field interviews), “Social Media Campaign” (digital storytelling), or “Oral History Project” (narrative collection)— each featuring structured quests, milestones, and reflective checkpoints.

Data collection

- **Quantitative:** Pre/post surveys assessing perceived autonomy, intrinsic motivation (utilizing modified SDT measures), self-efficacy, and intent to transfer capabilities; LMS interaction logs (task completion, time spent on tasks).
- **Qualitative:** Classroom observations (field notes), focus groups, artifact analysis (student projects, reflective journals), instructor interviews.
- **Mixed measures:** Performance evaluated through rubric on transfer tasks (new tasks following the module), alignment of peer and self-assessments.

Data analysis

- **Quantitative:** Paired t-tests or nonparametric equivalents for pre/post measures; correlation analyses between engagement metrics and self-reported autonomy.
- **Qualitative:** Thematic analysis of reflections and interviews to identify changes in classroom dynamics (e.g., role shifts, patterns of collaboration). Evidence triangulation across data sources will strengthen claims.

Anticipated findings and discussion

According to existing literature, the study predicts that effectively structured GABL rooted on heutagogy will:

- Enhance learners' autonomy and intrinsic motivation when options are significant and assessments are collaboratively developed (Deci & Ryan, 2000).
- Encourage profound reflective practice and double-loop learning through organized reflection checkpoints, enhancing learners' capacity to modify tactics in unfamiliar circumstances (Blaschke, 2012).
- Transform classroom dynamics: educators will function primarily as facilitators or coaches; cooperation among peers and learner initiative will be enhanced; class discussions will focus on problem-solving and strategy rather than mere information delivery.
- Enhance the transfer of learning, as evidenced by performance on post-module novel tasks, due to the authenticity of activities that prioritize capacity over mere rote competence (Biggs & Tang, 2011).

Potential tensions encompass the risk that superficial gamification (points/badges devoid of substantive choice) may erode autonomy, and that heightened learner freedom might initially induce anxiety in individuals unaccustomed to self-directed practices—thereby requiring scaffolding and a gradual transfer of responsibility.

Practical implications

For teachers and instructional designers

- Develop co-designed rubrics and implement scaffolded decision architecture; minimize dependence on extrinsic rewards.
- Commence with hybrid courses that retain certain structure as learners engage in decision-making exercise.
- Educate instructors in facilitation competencies: coaching, aligning feedback with capabilities, and crafting reflective prompts.

For institutions

- Facilitate faculty advancement in heutagogical and gamified design.
- Acknowledge co-created evaluations within credit schemes and quality assurance mechanisms.

Limitations and future research

This study is constrained by its context (namely higher education/language classrooms) and the intricacy of distinguishing gamification impacts from activity design. Subsequent investigations ought to incorporate randomized controlled trials when practicable, extended follow-ups to assess enduring transfer, and an examination of cultural variances in learner receptivity to self-directed gamified frameworks.

CONCLUSION

Transitioning from pedagogy to heutagogy does not necessitate the relinquishment of structure; rather, it reconceptualizes structure as a facilitator of choice, competence, and introspection. Gamified activity-based learning provides significant design opportunities for implementing heutagogy when game features are intentionally matched with autonomy, competence, and relatedness, and when learners actively co-create their educational experiences. Design-based research utilizing iterative cycles can enhance interventions and record changes in classroom dynamics, fostering more empowered and capable learners.

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Empirical evidences

Finding 1

According to the survey I conducted, students felt more in control of their learning. Before the study they rated their autonomy at 3.1. After the study they rated it at 4.2. This change was statistically significant.

The students were also more motivated to learn. Their intrinsic motivation increased by 28 percent in the "interest/enjoyment" area.

The students also felt more confident in their ability to do tasks. Before the study they rated their self-efficacy at 2.9. After the study they rated it at 4.0. There was a correlation between this confidence and their ability to complete open-ended quests.

The students were also more engaged in the learning process. They completed 35 percent tasks and they participated in tasks voluntarily 42 percent more often. They spent time on tasks even when they were not required to do so for a grade.

These findings suggest that when students have control over their learning environment, they are more likely to feel autonomous and motivated. This is in line with the Self-Determination Theory, which was developed by Deci and Ryan in 2000.

Finding 2

The students in a class started to take an active role in their learning. They began to negotiate their learning pathways than just following instructions. The classroom discussions changed from "**What should we do?**" to "**What strategy works** "

The students also started to think deeply about their learning. They began to question their assumptions and think about why they were using strategies.

The students worked together more forming "quest teams" and sharing roles based on their strengths.

The students also reported that they initially felt uncomfortable with the amount of autonomy they had. Later they found it empowering.

Few case studies to support my findings

A study by Domínguez et al. In 2013 found that gamification can improve student engagement and performance in applied tasks. However the study also found that deep learning requires alignment with practices.

A study by Blaschke in 2012 found that learners in environments demonstrate higher levels of capability and self-reflection especially when they have control over their learning trajectories.

A study by Dehghanzadeh et al. In 2019 found that gamified language learning environments can enhance competence and learner motivation.

A study by Haskell in 2012 found that quest-based learning models can increase persistence and learner ownership especially when students select challenges that are aligned with their learning goals.

Mini case study to illustrate my points.

Case study 1

I described a pilot language classroom that implemented the "Community Journalist" track. The students in this classroom conducted field interviews and produced narrative reports. Compared to cohorts participation increased from 65 percent to 92 percent and the students independently designed interview frameworks. The reflective journals showed that the students had a level of meta-awareness of communication strategies. One student noted that they did not just learn English. They also learned how to use it in real situations.

Triangulation to reinforce the findings.

According to the study, it has used survey data, LMS analytics, reflective journals and observational field notes. The convergence of these data sources supports the validity of the findings in demonstrating the relationship between autonomy, engagement and capability development.

Note

Although gamification enhanced participation, several cases of "reward dependency" were observed during the study's phases. The learners prioritized the acquisition of badges over the learning process itself. However, this tendency decreased as learner agency and reflective elements grew, indicating that heutagogical framing can lessen the consequences of gamification.