

Barriers and enablers in the implementation of gamified experiences in higher education

Barreras y facilitadores en la implementación de experiencias gamificadas en la educación superior

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ABSTRACT

The increasing use of gamified experiences in universities implies, in many cases, a transition from traditional methodologies towards more active and student-centred approaches. Although teachers are a key element in the successful development of these types of methodologies, there is little research that addresses the barriers and facilitators that teachers face when implementing gamification as a teaching strategy in higher education. This qualitative study examines, from the perspective of university teachers, how institutional, cultural and socio-demographic factors influence the implementation of gamified proposals. The fieldwork included 14 semi-structured interviews with teachers from different disciplines and academic levels, analysed by means of thematic analysis with the support of MAXQDA software. The results identify barriers linked to rigid curricular frameworks, weak institutional support, scepticism towards emerging technologies and negative cultural perceptions of gamification. In contrast, facilitators such as peer collaboration, positive student appreciation and teacher autonomy over programmes are highlighted. These findings show that methodological innovation, in this case, the introduction of gamified proposals in higher education, does not depend only on individual will, but requires policies, resources and an institutional culture that supports innovation if gamification is to be sustainable in higher education.

RESUMEN

El uso creciente de experiencias gamificadas en las universidades implica, en muchos casos, una transición desde metodologías tradicionales hacia enfoques más activos y centrados en el alumnado. Aunque los docentes constituyen un elemento clave en el desarrollo exitoso de este tipo de metodologías, existen pocas investigaciones que aborden las barreras y facilitadores que enfrentan los docentes al implementar la gamificación como estrategia de enseñanza en la educación superior. Este estudio cualitativo examina, desde la perspectiva de los docentes universitarios, cómo influyen los factores institucionales, culturales y sociodemográficos en la implementación de propuestas gamificadas. El trabajo de campo contempló 14 entrevistas semiestructuradas a docentes de distintas disciplinas y niveles académicos, analizadas mediante análisis temático con el apoyo del software MAXQDA. Los resultados identifican barreras vinculadas a los marcos curriculares rígidos, el escaso respaldo institucional, el escepticismo hacia tecnologías emergentes y las percepciones culturales negativas sobre la gamificación. En contraste, se destacan facilitadores como la colaboración entre colegas, la valoración positiva del alumnado y la autonomía docente sobre los programas. Estos hallazgos evidencian que la innovación metodológica, en este caso, la introducción de propuestas gamificadas en la educación superior, no depende solo de la voluntad individual, sino que requiere de políticas, recursos y una cultura institucional que apoye la innovación, si queremos que la gamificación sea sostenible en la educación superior.

PALABRAS CLAVES · KEYWORDS

Gamificación, educación superior, innovación pedagógica, formación del profesorado, recursos académicos
Gamification, higher education, pedagogical innovation, teacher training, academic resources

1. Introduction

Higher education has changed significantly in recent decades, transforming from more traditional and passive teaching systems to more active and student-centred ones. This pedagogical change has been associated with the increasing use of technology in the classroom and the possibility of having more flexible and interactive learning modalities (Ferrer et al., 2021 ; Howells, 2018). Among these new methodologies, gamification, understood as the use of game design components and principles in non-gaming contexts, has become particularly relevant. Its purpose is to strengthen student engagement, motivation and information retention through the incorporation of game dynamics in academic contexts (Lampropoulos & Sidiropoulos, 2024; Roig-Vila, 2016).

Despite the positive results of several studies, the adoption of gamified experiences in higher education still faces a considerable number of barriers. Institutional inflexibility, such as rigid curricula and strictly controlled academic programs, offers little space for creativity (González-Limón, 2022 ; Roig-Vila, 2016). According to research by Jaramillo et al. (2025) and Valenzuela et al. (2024), cultural resistance within academic institutions, where traditional lecture-based pedagogy remains the predominant approach, also limits the widespread use of gamification. In addition, Hung's findings (2024) highlight that including gamification is sometimes only considered an appropriate strategy for younger students, which adds to scepticism among teaching teams in higher education.

Much has been said in the existing literature about all the positive benefits of gamification, particularly because it stimulates learning, activates collaborative problem solving, and improves overall academic performance (González-Limón, 2022; Khaldi & Nader, 2023; Su & Cheng, 2015). However, few studies have focused on university teachers' perceptions of the barriers and facilitators in implementing gamified learning experiences. The vast majority of research covers student motivation levels or the effectiveness of certain gamified interventions, which prevents us from understanding the practical challenges that teaching teams have to deal with on a daily basis.

This paper aims to address this lack of information by providing a qualitative analysis of the experiences and concepts of university teachers who have taught gamified courses, paying particular attention to their concerns about institutional barriers. Specifically, this research seeks to offer a nuanced understanding of the factors that lead to the successful integration of gamification in higher education.

Thus, the purpose of this study is to analyse the barriers and facilitating factors encountered by university teachers when implementing gamified experiences in their classes. It aims to examine how variables such as curricular restrictions, institutional and cultural context, and sociodemographic characteristics of teaching staff (age, gender and academic rank) influence the adoption of gamified methodologies in higher education.

2. Methodology

This study uses an exploratory research design that seeks to understand the barriers and facilitators encountered by university teachers in implementing gamified experiences in higher education. This type of design was chosen in order to capture the richness and nuances of the participants' experiences. Given that the study focuses on perceptions, experiences, and situational challenges, a qualitative approach was adopted, which allows

for in-depth exploration of complex phenomena from the perspective of the participants themselves (Creswell & Poth, 2018; Denzin & Lincoln, 2018). This approach addresses the subjective realities of teachers, recognising that the implementation of gamification is mediated by personal, institutional and cultural contexts.

The study included 14 university teachers (11 men and 3 women) who were selected through purposive sampling to ensure that all participants had some form of engagement with or exposure to gamification. This sampling strategy was chosen in order to achieve optimal relevance and data richness. Participants spanned a range of academic disciplines, including humanities, social sciences, and STEM fields, and held positions such as teaching associates, lecturers, senior lecturers, and professors. Their age ranged from 28 to 56 years and included both men and women. This diversity helped the research capture a wide range of experiences and perspectives, especially with regard to the impact of different academic ranks and disciplines on attitudes toward gamification (see Table 1).

Table 1
Sociodemographic profile of participants

Participant ID	Age	Gender	Academic rank	Teaching experience
T1	39	Male	PhD Assistant Lecturer	6 years
T2	50	Male	Senior Lecturer	27 years
T3	48	Female	Teaching Associate	12 years
T4	42	Male	PhD Contracted Lecturer	18 years
T5	37	Female	Teaching Associate	12 years
T6	50	Male	Teaching Associate	8 years
T7	56	Male	Senior Lecturer	15 years
T8	50	Male	Teaching Associate	25 years
T9	31	Male	Teaching Associate	3 years
T10	33	Male	PhD Assistant Lecturer	7 years
T11	28	Male	PhD Assistant Lecturer	18 years
T12	28	Female	Doctoral candidate	4 years
T13	36	Male	PhD Assistant Lecturer	8 years
T14	45	Male	Professor	17 years

Note. Own elaboration.

3. Analysis and results

The content analysis was carried out using thematic analysis, guided by the structured proposal proposed by Braun and Clarke (2021). This translates into six stages: (1) verification and reading of transcripts, in other words, immersing oneself in the data, (2) marking units of meaning, in other words, texts that are circumscribed to a main idea, (3) grouping codes and creating themes, (4) verifying the pedagogy with respect to its themes, (5) delimiting and titling the themes, and (6) writing the document oriented toward closure.

The exploration was supported by MAXQDA data analysis software, which assisted in the management and retrieval of coded data. Themes were constructed inductively so that participants' narratives could give rise to patterns rather than imposing them in advance. Particular attention was paid to identifying barriers and facilitators described by teachers, and to understanding how sociodemographic factors such as age, gender, and academic rank may affect their experiences and attitudes toward the inclusion of gamified experiences.

To improve the reliability of the results, according to Bowen (2009) three types of strategies were implemented:

- Triangulation: Verification of interview data with field notes;
- Member checks: Summaries of findings were shared with a subset of participants to verify accuracy and alignment with their experiences;
- Audit trail: Detailed records of coding decisions and theme development were maintained to ensure transparency.

This study was conducted in accordance with the Academic Integrity Code of the (blinded). Participants were thoroughly informed about the purpose of the study, procedures, potential risks and benefits, and provided their consent before participating. Confidentiality was ensured through the use of pseudonyms, secure data storage, and participants were informed of their right to withdraw at any time without consequences.

The following section explains the thematic evidence from the interviews with teachers, which focus on the main barriers and facilitators of wanting to include gamified experiences in higher education. The results are organized into main thematic areas: barriers to the application of gamification; facilitators of gamification; and sociodemographic and contextual influences.

3.1. Barriers to the application of gamification

Four main barriers emerged: curricular restrictions, institutional inertia, technological limitations, and cultural perceptions.

- Curriculum restrictions

Throughout the interviews, several participants agreed that one of the main barriers to introducing changes in the classroom has to do with the rigidity of the curriculum. One teacher commented that these barriers tend to follow rhythms that do not fit well with

student-centred teaching approaches. Although sometimes, in the middle of the course, attempts are made to open up new ways of working or experimenting with more open dynamics, in the end there are always structural limits that make it difficult for these initiatives to flourish. For example, one participant pointed out that “Inflexible obstacles have always had different rhythms that differed from student-centred teaching methodologies. Often during the course, they tentatively promoted the creation of new open scenarios. However, in hindsight, barriers were always found that limited these processes.” (T2)

The weight of tradition and resistance to change also came to light. There is a certain preference for staying within the familiar, for continuing with the status quo, because tradition provides a sense of security. This not only reflects an individual stance, but is also very present in institutional culture: the new generates doubts, while the established is perceived as more reliable.

One participant summed it up clearly: “There is resistance to unconventional teaching methodologies. The stability of traditional practices is preferred because they have always been used. There is a fear of straying from tradition.” (T9)

Both ideas underline that the problem is not just methodological. Attempts to innovate in the classroom often face a framework that does not facilitate that change. For new methodologies to really work, it is also necessary to rethink how the system is organised, what time it allows, what leeway it gives to the teachers, and to what extent it is willing to question what has always been done.

- Institutional resistance

Several teachers interviewed said that, although in theory there is an interest in innovation, in practice educational institutions maintain a conservative stance towards change. One of them explained: “We do things in a certain way because that is what is socially expected. If someone deviates slightly from that accepted norm, the institution intervenes to correct it. Don't get me wrong, there is a department dedicated to innovation that is responsible for imagining what the future should look like, but there is a big gap between that vision and its actual implementation.” (T14)

Although they recognise the existence of departments dedicated to imagining a different educational future, they also point out that there is a big gap between those ideas and their effective implementation.

Along these lines, another participant pointed out that: “Academic management should promote gamification, not just facilitate it. It should come from above.” (T11)

In other words, it is not enough to leave it up to the teachers; clear leadership is needed to promote and support them from above.

Comments such as these reflect a fairly widespread perception that the institution seems more comfortable with stability than with transformation. Innovative initiatives, although well regarded in discourse, often remain isolated or lack continuity, precisely because they do not translate into a structural and decisive commitment from the highest levels of the institutions. Two participants described the following:

“We are not rewarded in any way for wanting to innovate in the classroom. We are only encouraged to do research.” (T4)

“Time is the main barrier. We would like to implement more innovations, but teaching, research and management responsibilities limit our time.” (T7)

This triple burden leads to a lack of availability to devote time to effectively designing, implementing and evaluating gamified experiences, added to the already existing lack of curriculum structure.

- Technological limitations

Access to advanced tools was another challenge. Some of the teachers interviewed shared their frustration at the lack of institutional support for the development of digital skills. One of them mentioned: “I would like to improve my digital aspect but I don’t receive any support and have to be self-taught and I don’t have time.” (T8)

This feeling of having to move forward alone was a constant theme in several accounts. In addition, the idea arose that the use of technology in teaching, especially in more innovative approaches such as gamification, is not integrated into a clear institutional strategy. As another participant stated: “At my university, its use is not promoted in a structural way. We do it individually and in research groups, but there is no impetus from above.” (T11)

Although some exceptions were mentioned, such as specific projects led by people with a particular interest in these technologies, the general perception was of some institutional resistance or passivity toward their systematic incorporation. In this sense, access to advanced tools depends not only on technical availability, but also on the impetus that may come from the educational organisation itself. One of the participants recounted:

“In general, no. There are few management positions with a specific interest in these issues. There are exceptions for those who lead virtual reality projects applied to teaching, related to related to game-based learning or serious games. But in general, there is some resistance to integrating more technology with gamification.” (T13)

- Cultural perceptions

Several teachers pointed out that one of the biggest obstacles to the acceptance of gamification in higher education is the cultural stigma that associates it solely with video games and childish students. As one of the participants put it: “The biggest challenge is the stigma of associating these techniques exclusively with video games and children.” (T3)

There is a deep-rooted idea that these techniques are only for children, which creates a limited and sometimes derogatory perception of their educational value at higher levels.

On the other hand, some teachers commented that: “There’s a kind of confusion, because if students learn and get good grades, some people think you’re giving them the grades for using gamification.” (T14)

This confusion reflects a lack of understanding of how gamification can motivate and enhance learning, beyond simple entertainment.

Breaking these prejudices is a necessary step for these methodologies to be valued as a legitimate and effective tool in academic training. In the words of one participant: “On the other hand, the stigma that games are for children is still present.” (T6)

In short, these cultural perceptions make it difficult to integrate gamified experiences in universities.

Table 2

Barriers identified by participants during the analysis

Topic	Description	Direct quote
Curricular limitations	Rigid academic programs limit pedagogical innovation.	"The rigidity of specific course objectives can be an obstacle"
Institutional resistance	Lack of management support for new methods.	"At the managerial level, there is resistance to unconventional methods..."
Technological limitations	The lack of digital resources makes efficient implementation even more difficult.	"Dependence on the digital campus and the tools available... restricts our options..."
Cultural perceptions	Gamification is considered childish or inappropriate for higher education.	"The biggest challenge is the stigma of associating these techniques exclusively with video games and children"

Note. Own elaboration.

3.2. Facilitators of gamification

Three facilitators were the most prominent when it comes to including gamification by the teaching team: Collaboration between peers, student commitment and teaching autonomy.

- Support between colleagues
Many teachers highlighted the importance of camaraderie, as the following participant points out: "By sharing experiences and working as a team, we dare to use tools and design innovative narratives." (T8)

Exchanging ideas with colleagues creates an atmosphere of trust that facilitates experimentation and joint learning.

As the participant explains: "When you find someone who is reciprocal and proactive, synergies and positive feedback are generated." (T4)

This type of collaboration not only encourages professional development but also promotes constructive feedback that helps improve and consolidate teaching practices.

In short, support among peers is seen as an essential element in overcoming challenges and advancing the incorporation of new methodologies in the classroom.

- Student commitment

One participant stressed that: "When students see the benefits, they tend to respond positively and commit themselves." (T5)

This favourable attitude provides significant encouragement for the teaching team to continue innovating in their practices.

Also, one participant highlighted: "In general, they are quite open to new things, especially when the boundaries and the evaluation system are explained to them clearly. However, they need you to set very clear guidelines and assessment criteria, as is typical with university students, especially in the first years." (T9)

In particular, first-year university students need to be given precise guidelines and assessment criteria, which helps to build confidence and security in the process.

Taken together, these student reactions not only facilitate the adoption of innovative methodologies, but also encourage teachers to continue exploring new pedagogical strategies.

- Autonomy in teaching

Many teachers valued the academic freedom they enjoy. For example: "Fortunately, most of the conditions are positive. We have academic freedom, and the faculty encourages innovation a lot." (T3)

This autonomy allows them to try out new methodologies and adapt their courses according to specific needs and contexts, which is seen as a key aspect in driving change in teaching.

Similarly, one participant argued: "It's essential. If a teacher has the right attitude, they will seek out the necessary training and resources. Attitude makes all the difference, even with training or resource limitations." (T13)

Although there may be limitations in training or resources, a motivated teacher will seek out the necessary tools and knowledge to improve. In this sense, personal disposition becomes a decisive factor that makes a difference in the implementation of new pedagogical practices.

Also, one participant said: "There are more facilitators in new degrees and more barriers in older ones." (T10)

This shows that the context and age of the academic program influence the teaching team's room for manoeuvre to innovate.

3.3. Sociodemographic and contextual influences

The analysis revealed notable differences according to age, sex and professional category.

- Age

Younger teachers, especially those under 40, seemed to embrace gamification more fully, seeing it as a natural extension of digital pedagogy. One of them stated: "Among colleagues, there is often a fear that students will not respond well, that the class will get out of control." (T8)

Older teachers were more cautious, often citing workload, time commitment and socio-technical barriers.

- Gender

Although the sample was predominantly male, both male and female participants described similar challenges and opportunities in relation to gamification. However, some female teachers pointed to additional pressures associated with balancing multiple roles, including teaching, research and management, which limited their ability to innovate effectively. Two participants commented:

"As you don't belong to the gamer world, which is a predominantly male sector, you feel like you have to work harder." (T12)

"Time is the main barrier. We would like to implement more innovations, but teaching, research and management responsibilities limit our time. On the other hand, the female sector does not have the same number of role models to inspire it." (T5)

- Professional category

Teachers with a lower, non-tenured status on the teaching staff (e.g., lecturers and teaching associates) showed the greatest enthusiasm for gamification, but faced greater structural difficulties, such as a lack of resources and recognition. During the interview, one participant stated: "The problem arises when there are personal tensions within the teaching team, as that can turn innovation into a competitive tool rather than an advantage for the university." (T1)

Teachers with a higher academic level and equally consolidated experience, commonly clung to traditional forms and were less likely to adopt new approaches unless they were formally encouraged and properly trained by the institution.

Table 3

Facilitators identified by participants during the analysis

Topic	Description	Direct quote
Peer support	Collaboration fosters confidence to innovate.	"By sharing experiences and working as a team, we dare to use tools..."
Student participation	Positive feedback from students encourages the use of gamification.	"When students see the benefits, they tend to respond positively and commit themselves"
Autonomy in teaching	The freedom to design courses allows for gamification.	"Fortunately, most of the constraints are positive. We have academic freedom..."

Note. Own elaboration.

4. Discussion

From the teachers' point of view, the adoption of gamification in higher education is conditioned by various factors, and this study highlights these nuances. Most of the literature focuses on the advantages of gamification in higher education in terms of student motivation and learning outcomes. This research highlights the structural, cultural and personal barriers faced by teaching teams in relation to the implementation of this type of methodology, in line with the findings of Dichev and Dicheva (2017), who also identify similar limitations from the teaching perspective.

Perhaps the most notable obstacle is the inflexible curriculum framework that is established at the university level. This rigidity does not allow for many pedagogical innovations. Participants report that they endure strict learning outcomes linked to deadlines, templates and institutional framework that clash with interactive and dynamic learning designs. This coincides with Roig-Vila (2016), who argues that in higher education, innovation is promoted as discourse, but is largely stifled within the pragmatic realms of the curriculum. Inconsistency within institutions contributes to widening the gap between what is said and what is actually done. Along these lines, Osuna et al. (2021) highlight that the lack of enabling conditions and institutional leadership severely limits the adoption of gamification.

The resistance of educational institutions adds another layer of complexity. Although universities often present themselves as spaces committed to innovation, this intention is often expressed only in the form of strategic documents, centres with catching names or one-off workshops. However, in many cases, these actions do not translate into real and sustained support for teachers. Rather, they seem to be initiatives designed to comply with an institutional image or respond to certain external expectations, without actually implying profound changes in day-to-day educational practice. When resources such as budget, time or institutional recognition are lacking, the drive to innovate falls almost entirely on the individual initiative of some teachers, rather than being a shared effort. This creates significant inequality between those who have access to networks, support and materials,

and those who, on the contrary, face these limitations without any backing (Aldhilan & Alenezi, 2025).

According to the framework of García-Holgado et al. (2020), gaps within institutional frameworks shape changes in a teacher's ability to implement instructional technology. In this case, the lack of access to technological tools constitutes a significant barrier. Many of the teachers interviewed depend on rudimentary platforms (basic LMS) or customised software without institutional support. Institutions tend to approach technology integration from a very pragmatic perspective, often delegating responsibility directly to teachers. This gives rise to a logic of "figure it out yourself", in which each teacher must find their own way to adapt and apply technological tools. Although this approach may work for those who are particularly motivated or have prior knowledge, it poses serious problems when analysed in terms of equity and sustainability at the level of the education system as a whole.

Perhaps more subtle, but deeply rooted in cultural perception, is the stigma that accompanies gamification. Attitudes toward student participation are often problematic because, although students respond very positively, resistance from some levels of universities and administration indicates a lack of academic rigour in the approach. This resonates with Khaldi and Nader's (2023) assertion that gamification strategies face an "entertainment bias" and criticism of that nature that undermines their credibility as a learning strategy. A significant number of participants openly express that gamification is considered solely "playful", "childish" or simply "too inappropriate" within formal academic settings. At best, efforts to promote it are fruitless, without generating real progress or significant change. Fuchs (2023) also warns that the uncritical adoption of playful dynamics without a clear pedagogical connection accentuates these types of negative perceptions.

In addition, this research highlights certain facilitating factors that encourage the use of gamified experiences in higher education. One notable aspect is the influence of peer cooperation as well as professional associations. Teachers who receive some form of support from their peers, whether through co-teaching, resource sharing, or even informal mentoring, are more willing to try new approaches and dare to experiment with new possibilities. This supports the observation of Sánchez-Mena and Martí-Parreño (2017) that communities of practice are vital for the dissemination of innovation in academia. It also aligns with Marinensi et al. (2023), who point out that peers support is a key factor in overcoming the initial mistrust and exploring new methodologies.

Similarly, positive feedback from students has a very powerful effect. Several teachers comment that seeing their students more involved, participatory and achieving better results not only validates their efforts but also generates extra momentum to continue innovating and improve their teaching practice. This finding corroborates the work of Hamari et al. (2014) on the existence of a feedback loop between student engagement and teacher motivation. In this sense, gamification not only improves learning processes, but also revitalises teachers' passion for teaching.

Autonomy in course design appears as the third facilitating factor. When departments allow their teachers some freedom to adapt or redesign curricula, gamification is more easily integrated. In contrast, departments that maintain very strict or controlled curricula leave little room for teachers to be creative. This points to a key aspect that education policies must consider promoting innovation involves investing resources, but it also requires structural changes that give teachers more autonomy and decision-making power (Deterding, 2020).

Sociodemographic characteristics also contribute contextually. Younger teachers and those in the early stages of their career seem more willing to try gamified experiences, possibly because they have greater digital skills or because they have not developed rigid teaching routines. However, these same teachers often occupy more precarious positions (e.g. temporary contracts), which limit their resources and institutional support. On the other hand, more senior teachers enjoy greater institutional authority, but show greater resistance to adopting new approaches. This suggests that the lack of pedagogical innovation depends both on individual attitudes and on structural inequalities in academia (Sánchez-Mena & Martí-Parreño, 2017).

Overall, these results indicate that gamification as an educational strategy is promising, but its effectiveness in higher education institutions depends on a synergistic alignment between policies, technological resources, culture and teacher agency. In the absence of this synergy, gamification becomes an isolated niche for innovative professionals, rather than representing a significant educational transformation (Alhasan et al., 2025).

4.1. Limitations

One of the main limitations of this study lies in the size and composition of the sample. Although a good variety of disciplines and academic rank is obtained, the sample is composed of only 14 teachers, with a clear male over representation. This may limit the detection of more profound gender-related differences. Moreover, since it is an exclusively qualitative approach with intentional sampling, the results cannot be generalized to the entire university teaching population. Finally, although the analysis focuses on personal experiences and is rich in nuances, it could benefit from triangulation with direct observations in the classroom or analysis of curriculum documents to complement the discourses.

In this sense, it would be interesting to expand this research with a mixed methodology that combines qualitative analysis with quantitative questionnaires applied to a larger sample, allowing for the identification of more generalisable patterns regarding the barriers and facilitators of gamification. Another promising line is to analyse the institutional impact of teaching innovation policies on the actual implementation of gamification. Specifically, it is worth studying how different models of university governance, teaching incentives and recognition structures, such as internal accreditations, awards or reductions in teaching load, influence whether or not teachers adopt gamified methodologies. This approach provides a better understanding of the extent to which the strategic decisions of management teams condition the room for manoeuvre of teaching staff and how an organisational culture that is truly conducive to sustained innovation can be created.

5. Conclusions

This research investigated the challenges and supports that university teachers face when applying gamification in the teaching of higher education courses using purely qualitative data from semi-structured interviews. The results highlight systemic challenges and systematic supporting factors that influence teachers' attitudes toward gamified teaching and its use.

Some of the most prominent barriers identified include rigid support for the existing curriculum, insufficient institutional support, inadequate technological infrastructure, and deeply ingrained cultural attitudes that view gamification as an academically legitimised pseudo-method. These issues reflect the ubiquitous conflicts between innovation and conservatism in university systems. Despite the institutional narrative advocating for change in teaching and learning practices, teaching staff tend to operate in innovative contexts that lack support, whether structural or symbolic.

Alongside these barriers, the research also analysed the factors perceived as supports and discovered some of the most important facilitators. Among these facilitators were peer collaboration, student feedback and teacher self-governance. Teachers who felt empowered in their departments, supported by colleagues and actively engaged with students were more likely to use gamification in their classes. The results shed more light on the growing perception of the need for individual action combined with a collective structure to achieve sustainable change over time.

Importantly, the analysis also revealed that socio-demographic and contextual factors influence the teaching staff's attitude towards gamification. Although younger teachers with greater digital literacy seem more willing to experiment, many of them face institutional precariousness. In contrast, more senior staff tend to enjoy stability but are much more anchored in their traditional educational habits.

Taking into account all the conclusions of this study, for gamification to be adopted in higher education, comprehensive support policies at the institutional level, an appropriate cultural transformation in which play and creativity are integrated into educational contexts, and the allocation of resources are required. Subsequent efforts should go beyond providing training sessions on gamification to teachers, instead they should foster an organisational culture in which innovative teaching practices are adopted as part of the university's own identity and mission.

The study aims to be useful in guiding institutional decisions, designing innovation policies that are more in line with the reality of teaching, and rethinking the type of support that truly favours methodological change. It serves as empirical evidence for management teams and university policy makers who wish to promote gamification from a structural approach, beyond individual motivation. It also offers teachers themselves validation of their experiences and a framework for identifying the conditions necessary to promote more innovative and sustainable teaching practices.

Author Contributions

Conceptualisation, Author1; data curation, Author1; formal analysis, Author1; research, Author1; methodology, Author1; project management, Author1; supervision, Author2; validation, Author2; visualisation,

Ethics approval

Not applicable

Consent for publication

All authors have consented to the publication of the results obtained by means of the corresponding consent forms.

Author1; writing—preparation of original draft, Author1; writing—review and editing, Author2.

Data Availability Statement

The data set used in this study is available at reasonable request to the corresponding author

Conflicts of interest

The authors declare that they have no conflict of interest

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