

Gamification and Experience Architecture: A Qualitative Research on the Users' Engagement in Startup-Led Digital Platforms

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Abstract: Gamification is an emerging design tactic in digital platforms, especially as used by startups to increase user engagement within today's competitive and attention-constrained markets [1]. What these firms are doing today is incorporating game-inspired elements such as progress tracking, rewards, narratives, and social interactions within their application platforms. This allows them to motivate users and even encourage a consistent long-term engagement/participation [2]. However, what has been observed over time is the fact that the contemporary research that exists in this field is predominantly quantitative. It majorly focuses on key measurable outcomes such as retention rates, task completion, or usage frequency. Although these often overlook the subjective and experiential dimensions of user engagement.

The aim of this study is to address any such gap in the existing research and literature that revolves around the said field. To ensure the same, the study will adopt a qualitative approach. This will enable to explore the ways in which gamification practices are designed, experienced, and interpreted by users within digital startup environments. The study will deploy a qualitative review. It will combine it with multiple case studies across EdTech, Health and Wellness, and Fintech, and Productivity/Social Platforms. It will then analyse publicly available platform features, secondary founder narratives, product documentation, and user community discussions. What it will conduct next is a thematic analysis and cross-case comparison which will help in the identification of recurring patterns and meanings related with gamified engagement.

The findings indicate that successful gamification is to be regarded as a kind of behavioural architecture that focuses less on extrinsically driven reward systems and more on emotional engagement, engaging narratives and social interaction [3]. By reconceptualising gamification as experience-centred design, rather than an incentive-based add-on, the research extends the qualitative gamification literature and yields actionable implications for startups seeking to develop ethical, meaningful and sustainable user experiences.

Keywords: Experience Architecture, Gamified Interaction Design, Digital Platform Engagement, Startup Ecosystems, Behavioural Design.

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I. INTRODUCTION

A. Digital Platforms and the Engagement Challenge

Digital spaces have increasingly become interwoven into everyday life. These comprise places for learning, managing finances, health monitoring and daily organisation [4]. As digitisation today has infiltrated every aspect of our lives, users are faced with a growing ecosystem of applications and services vying for their attention [5]. This abundance has exacerbated the engagement problem

confronting platform companies, whose users routinely demonstrate fragmented attention, declining loyalty, and rapid switching behaviour [2] [3]. Engagement is no longer driven solely by functional utility. Rather, users expect platforms to deliver meaningful, emotionally resonant and rewarding experiences [6]. User retention is particularly vital for digital newcomers as these ventures typically lack brand and financial stability [7], so early attrition can endanger both product validation and long-term survival.

B. Emergence of Gamification as a Strategic Design Approach

As an apt response to the challenges arising in engagement, gamification has emerged as a prominent strategic design approach, which can be implemented within digital platforms [4]. In straightforward terms, gamification as a technique involves the deliberate yet meticulous incorporation of game-inspired elements within digital platforms. These includes incorporation of elements like progress indicators, challenges, feedback loops, narratives, and social interaction into non-game environments. The resulting outcome allows for a sound influencing of user motivation and behaviour [8]. Instead of converting platforms into entertainment mediums, gamification is used to make interactions with a system more purposeful, more engaging and more psychologically motivating [6]. In a digital-native age, as startups embrace gamification to a greater extent than ever due to its adaptability and close fit with the iterative design process, it has been employed to encourage the formation of habits and lead users in the journey, or create emotional connection [3] [2] [6] [8]. As a result, gamification has evolved from a novelty feature into a core component of experience design and engagement strategy.

C. Importance of User Engagement for Startup Sustainability

User retention is a key factor in the viability and growth of digital start-ups. Unlike mature companies that have legacy customers and a great deal of marketing resources, startups generally require that users continue to engage with the startup for testing of hypotheses, value proposition refinement and achieving scalability [9]. Users who engage with a firm or its products are more likely to remain active. Furthermore, they not only tend to recommend the platform to others, but also develop long-term relationships with the product. On the contrary, if the engagement is weak, it may lead to high churn rates. The organisation might receive limited feedback on their products which would eventually lead to stagnated growth. As we keep this point of view in mind, it can thus be concluded that engagement is not merely a performance metric. It is, however, a strategic resource. It reflects in the broader sense, a platform's ability to create relevance, trust, and value within users' everyday lives [10].

D. Importance of User Engagement for Startup Sustainability

In the current times, it has been observed that gamification and engagement have grown in prominence in digital platform research [5] [8]. However, in terms of their existing literature, one can view that these pieces of text are being largely dominated by quantitative methodologies. We know for one that engagement is frequently assessed through measurable indicators. These could be parameters such as how often the user logs in, how long they stay online, completion rate of tasks or whether or not the user is securing rewards [11]. Although such measurements are valuable for examining usage characteristics, they often do not tell the whole story. What they rather present is a partial understanding of engagement. Another limitation that one needs to consider is the fact that quantitative approaches often fail to capture users' true emotional responses. They also do not gauge in complete accuracy intrinsic motivations, sense of progression, and even identity formation. These elements

are central to sustained engagement [11]. Moreover, often the quantitative studies that assess engagement tend to abstract it from its social and contextual dimensions. They overlook key factors such as how startup environments, evolving designs, and user narratives shape the meaning of gamified experiences over time [12].

E. Rationale for a Qualitative, Startup-Focused Study

As we take into consideration these limitations, we observe a pertaining need for a qualitative and start-up focused investigation. This is both timely and necessary to think beyond the restrictions mentioned above. By undertaking a qualitative approach, one will be able to explore the ways in which gamification is experienced, interpreted, and negotiated by the users. One will also be able to look beyond its measurable impact attained via behavioural outcomes [12]. Thus, through the adaptation of an interpretivist perspective, this study will seek to uncover the meanings users assign to gamified interactions. It will also unravel the different ways in which these meanings influence engagement. The study will lay a keen focus on digital startups. This, in turn, will allow the research to take into account the true essence of gamification practices within rapidly innovating environment. The study will further consider milieus where experimentation and uncertainty are also a prominent consideration. Such contexts will present invaluable insights into how gamification functions as an adaptive strategy design rather than a fixed set of mechanics.

II. RESEARCH OBJECTIVES AND GUIDING QUESTIONS

If we look cohesively, the primary objective of this study is to explore the manner in which gamification practices shape user engagement within digital startup platforms. In specific terms, the research aims to examine the ways in which gamification mechanisms are designed. It will further take into account how these elements are then embedded within startup products. Through a careful analysis of existing literature and case studies, the study will further delve deeper into the ways in which these mechanisms influence users' cognitive, emotional, and behavioural engagement. It will eventually take into account the common patterns that emerge across different startup domains. Guided by these questions, the study will then aim to address the following questions

- How do digital startups employ gamification to foster meaningful user engagement?
- How do users experience and interpret gamified elements over time?
- What design principles support sustainable engagement without compromising user autonomy?

In order to be able to answer these questions with consistency, the study will eventually also move on to contributing to filling the actual gap in what currently exists within the qualitative gamification literature. It will also provide practical advice for startups looking to build ethical, humane, and resilient digital experiences.

III. LITERATURE REVIEW

A. Conceptualising Gamification

In order to truly conceptualise gamification in the current context, one first needs to understand its evolution and look beyond its set definitions. Gamification has today emerged as a prominent concept within digital design and user experience research over the past two decades [8] [12]. If we define it in broader terms, gamification refers to the application of game-inspired elements in non-gaming contexts. The primary motive behind this is to influence user motivation and behaviour [13]. When we look at the original definitions of gamification, these were often based on the instrumental application of game mechanics. These mainly included key elements such as points, badges and leaderboards to spur engagement and performance [14]. Over time, however, a new dimension of scholarship in the domain of gamification emerged. We have now transcended surface mechanics to include a deeper experiential, psychological and cultural dimension [15].

One also needs to keep in mind that gamification was initially popularised in marketing and educational contexts. However, it soon gained popularity with the need of digital platforms to identify scalable methods to retain user attention and encourage repeated interaction [16]. In addition, as the digital ecosystem evolved, we realised that good gamification isn't just about rewards. It's not really about engagement so much as meaning, guiding the user's journeys and nurturing motivation [17]. Hence, as the modern interpretations say, Gamification is used as a design philosophy. It draws from motivational theory, human-centred design and behavioural science to help users interact with digital systems.

B. Gamification vs. Game Design vs. Playful Design

Gamification is commonly associated with similar terms such as game design and playful design, but should be differentiated from them [8]. Game design is the art of applying design and aesthetics to create a game for entertainment or for educational, exercise, or experimental purposes [18]. Gamification is thus distinctly not the goal of making a game, but the addition of game elements to various contexts, with an intentional purpose to improve motivation and engagement for activities outside of gaming [3] [8] [13].

Playful design, however, prioritises designing for fun and exploration with no explicit goals or systems of rewards. It is centred on desire, imagination and expression of feelings rather than planned development or performance [19]. 'Gamification' represents a midway between these strategies, where a balance must be struck between the prescriptive mechanics and more open experiential elements as to encourage purposeful interaction [8]. It is important to draw these distinctions because misguiding gamification can often be reduced to a simplistic game mechanics approach that fails to address user experience design or meaning-making [20].

C. Theoretical Perspectives on Gamification

➤ Self-Determination Theory:

One of the most popular theories for gamification and motivation is the Self-Determination Theory (SDT) [21]. SDT argues that human motivation is based upon the satisfaction of three fundamental psychological needs, namely autonomy, competence and relatedness. By playing around and choosing what you do, feeling successful when you make progress, and talking to your friends about the game, you are way more likely to be intrinsically motivated instead of extrinsically motivated [22]. Moreover, research that applies SDT to gamified systems suggests that poorly implemented gamification can backfire if it is perceived as overly controlling or focused on extrinsic rewards [20]. However, when gamification enables autonomy via flexible pathways, competence through feedback and mastery, and relatedness via social interaction, it can have a very positive effect on sustained engagement [23]. This perspective brings out the relevance of experience design in gamified platforms.

➤ Flow Theory:

According to Flow Theory, as conceptualised by Csikszentmihalyi, flow is a mental state of immersion and optimal experience that occurs when we perform activities that challenge and match our skill level [24]. Gamification may support flow by breaking activities into manageable tasks or achievable challenges, allowing for immediate feedback and a feeling of progression [25]. Online environments frequently rely on flow principles to encourage user engagement via levelling systems, adaptive difficulty and feedback loops [25] [26]. In gamified environments, flow is especially relevant to the continuous use situation, as users in such a state are more likely to return voluntarily and maintain attention. Yet finding the perfect balance can be tricky, too much challenge tends to turn away users and spoil their fun, while tasks that are too easy tend to bore people [26]. This trade-off is of particular importance for startups, which have to adapt to a wide range of user skill levels.

➤ Behavioural Design and Habit Formation:

While routine-centred gamification may increase adherence over the course of time, detractors assert that overdependence on behavioural prompts may yield dependence or superficial engagement [27]. Qualitatively, if we observe the ways in which users experience such mechanisms, it in turn becomes the key to assessing their ethical and phenomenological implications. Behavioural design thus represents both an opportunity and a challenge within gamification research [15]. Behavioural design theories underscore the importance of cues, routines and rewards in repetitive behaviour. Gamification often makes use of these principles to motivate behaviour change, especially in well-being, productivity and education apps. Methods such as streaks, reminders and tracking progress are used to make using the platform a habitual part of users' daily life [12][13].

➤ *Narrative and Social Engagement:*

Narrative and social theories emphasise the role of story, identity, and community in significantly contributing to engagement [28] [29]. Gamification frequently uses narratives, missions and role identities to give user actions sense and coherence [14]. By layering tasks within a larger narrative or goal, platforms can turn mundane actions into powerful experiences [15]. Formats which involve social interactions, e.g., collaboration, competition or peer recognition, boost even more engagement as individual behaviour is embedded in social environments [30]. They provide support for relatedness and identity construction, especially in settings where community involvement is key. Qualitative research is particularly useful in examining how storied experiences and social interactions impact users' sense of belonging, investment, and commitment over time [31].

D. Understanding User Engagement in Digital Contexts

➤ *Cognitive, Emotional, and Behavioural Dimensions:*

It can well be ascertained that the concept of user engagement is a multidimensional construct. It comprises the cognitive, emotional, and behavioural components [11]. In simpler terms, cognitive engagement refers to the level of mental investment, attention, and perceived relevance that any user associates with a platform [26]. Furthermore, as we discuss emotional engagement, it involves affective responses. These include ones such as enjoyment, satisfaction, or frustration. Likewise, behavioural engagement is reflected in observable actions. These comprise of frequency of use, task completion, and participation [32]. A lot of quantitative studies have been conducted to date, often emphasising more on behavioural indicators. They at times neglect the cognitive and emotional dimensions that drive meaningful engagement. But if nothing, qualitative research at times makes for a more comprehensive and advanced understanding of the field in question. It represents users' thinking processes, their feelings, and actions involved within the gamified system [31]. This multidimensional view is most important in assessing the depth and durability of engagement.

➤ *Short-Term Versus Long-Term Engagement:*

When we consider engagement, it has to be clear at an early stage that temporarily there are two kinds of engagement: the short-term and the long-term. If we dig further into short-term engagement, it is usually fueled by novelty value, incentives or extrinsic reasons. On the contrary, long-term retention is a cumulative function of intrinsic motivation, habit and identity formation [8]. Gamification strategies that succeed initially may fail over time. This happens as they rely solely on extrinsic rewards or repetitive mechanics [20]. Furthermore, long-term engagement also requires evolving experiences. It takes into account meaningful progression and emotional resonance [33]. For any startup, what is particularly important is to understand this transition from initial attraction to sustained commitment. This is mainly because these startups' early growth phases may mask deeper engagement challenges. Thus, it becomes highly crucial to study qualitative insights

for examining how user engagement evolves across time and context [7] [31].

E. Gamification in Startup Environments

➤ *Product-led Growth*

In startup culture, gamification often goes hand-in-hand with product-led business growth models in which good user experience leads to purchase and proliferation. Users are often led through product value propositions using gamified onboarding, milestone tracking and referral systems. These tools minimise friction, foster investigation and promote self-service learning on the platforms. Gamification enables product-led growth by linking user success with platform success; it turns engagement into a user benefit and a business outcome [13] [15] [3]. However, the effectiveness of such approaches is often sensitive to careful use and situational application, rather than a general solution [25].

➤ *UX-Driven Innovation:*

Startups often prioritise UX-driven innovation. This enables them to set themselves apart in competitive markets. In general, gamification is a design tool that can be used in many different ways. It enables startups to test engagement approaches and iterate quickly on user feedback [34]. In comparison to well-established companies, startups can more easily embed gamification into the fabric of daily processes rather than as an afterthought [34] [35]. This fusion points to the fact that gamification works best as experience architecture and not just surface decor. Understanding how startups incorporate fungible elements of gamification into UX design could provide useful information on the strategic possibilities and shortcomings of this approach.

F. Gaps in Existing Literature

Despite the fact that gamification today has become a widely accepted field, there are several gaps that remain in the literature. To begin with, there is a disproportionate emphasis on quantitative measurement. This, in turn, leads to a highly restricted or limited exploration of user experiences or meanings. Secondly, many times, startup contexts are underrepresented. Most of the studies focus either on education, corporate training, or established platforms. Third, ethical considerations and long-term engagement dynamics are often discussed theoretically rather than being taken into account empirically. The aim of this study is to thus, address these gaps by adopting a qualitative, multi-case approach that is focused on digital startups. The research will examine gamification as a lived and contextual phenomenon. The research will further contribute significantly to a more nuanced comprehension of how gamification shapes user engagement in real-world digital environments.

IV. RESEARCH METHODOLOGY

A. Research Design and Philosophical Orientation

The research design of this study is qualitative and it is based on an interpretivist philosophical paradigm. The interpretivist paradigm focuses on interpreting social phenomena based on the meanings people give to their experiences, not as an attempt of finding objective or

universally valid truths. As gamification and user engagement are subjective, context-dependent and experiential in nature, it is a qualitative research that fits well to investigate how the users experience and engage with gamified digital platforms. To do so, rather than quantifying engagement in terms of predetermined quantities, this paper examines at how engagement is enacted through design principles and narratives as well as social interaction. The interpretivist approach assumes that reality is socially constructed and that user involvement appears in the interactions between users and the design of platforms. This way, we are able to glean rich contextual insights of how gamification works in a dynamic startup space with ever-changing product features and user expectations.

B. Case Studies and Selection Criteria

A multiple case study approach was applied to the investigation of gamification applications in different digital start-up settings. Case studies are appropriate for qualitative research which explores complex situations in real-life context. In order to upscale the analytical breadth and maintain the comparability of cases, two main criteria for selection were set.

First, the startups were chosen to represent diversity in both development stage and industry domain, including EdTech, Health and Wellness, FinTech, and Productivity or Social platforms. This diversity enables the work to detect differences in gamification strategies, user motivations and engagement dynamics between contexts. Second, each deployed platform exhibited explicit application of gamification techniques, like progress recognition, awards, challenges, narrative and social issues. This made gamification an integral part of the system rather than a superficial or incidental design element.

C. Data Sources

The study relies on multiple secondary qualitative data sources to enable triangulation and enhance credibility. Platform analysis formed a central data source, involving systematic observation of user interfaces, onboarding flows, reward systems, and progression mechanics. This analysis focused on how gamification elements were integrated into user journeys and how they shaped interaction patterns.

Further, publicly available interviews with secondary founders and public talks are considered in order to understand design intentions, strategic motivations and experiential aims of gamification. Product documentation, User Experience (UX) blogs and design case studies which were published by startups or product companies and are available online were also reviewed to comprehend the background for design decisions and iterative workflow. Finally, findings from the user communities, which include forum discussions, app reviews, and social media interactions, were also analysed in order to gain insight into users' points of view and subjective experiences with gamified features. When we collectively consider these as

a unit, these information sources provide a deep-dive into the multifaceted insights of gamification practices and engagement experiences.

D. Data Analysis Methods

One of the primary methods that was employed for data analysis was using thematic analysis. It is a widely used qualitative process which helps in the identification, analysis, and interpretation of patterns within the textual and visual data. A key process involved within the analysis is an iterative process. This includes familiarisation with the data, initial coding, theme development, and refinement. Codes were generated inductively. This allowed themes to emerge from the data rather than being imposed a priori.

Following within-case analysis, cross-case comparison was employed. The primary motivation beyond this was to determine correlations between gamification and engagement within the context of startups in different domains. Moreover, this contrasting approach helped to identify not only themes common across both contexts but also variations specific to each context. Narrative synthesis, a step employed in the analysis, followed. It was used to integrate findings into coherent explanations. These allowed the research to connect design practices, user experiences, and theoretical insights. This combination of analytical methods allowed for both depth and breadth in understanding gamification-driven engagement.

E. Ethical Considerations

Another central aspect of this research design was ethical considerations. These were important in particular as the study involved the use of secondary and publicly available data. All the data sources were accessed through open platforms. This gave the study a means of verifying that no private or personal information was ever employed. Additionally, caution was taken to facilitate respectful reading and representation of users' narratives, while avoiding misrepresentation and overgeneralisation.

Research reflexivity has also been sustained throughout the process. However, the research recognised that it could not avoid interpreting the data and is sensitive to bias, assumptions and prior expectations. Reflexive strategies also involved ongoing reflection of analysis decisions and systematic notes about theme development. Through elevating transparency, ethical consciousness and reflexivity, the study seeks to retain methodological fit for purpose while 'giving back' in a responsible fashion to qualitative gamification research.

V. QUALITATIVE CASE STUDY ANALYSIS

The following section presents a detailed, real-world, qualitative analysis of different global companies. These organisations are a perfect example of distinct gamification strategies within different digital domains. These are just a few examples and they span from the following verticals in which companies have been successfully applying these

concepts: Duolingo (EdTech), Strava (Health & Wellness), Moven/CRED (FinTech) and Habitica (Productivity/Social). They were chosen as they all offer interesting perspectives for the explanation of how gamification, over time, influences user engagement, motivation and community participation.

A. Edtech Startup Case: Duolingo

➤ *Gamified Learning Mechanics:*

Duolingo, today, has become one of the most cited examples of gamification in the realm of digital marketing. The app in itself comprises of a game-like structure, which is designed to make language acquisition appealing and habitual. The platform uses mechanics such as streaks and experience points (XP), badges, levels and leaderboards. These mechanics make every lesson feel like a mini-challenge that includes instant feedback and the feeling of progression [36] [37]. Duolingo also capitalises on daily streaks and therefore makes it keen in the user's best interest to come back day after day to avoid breaking the chain of learning, which in turn promotes a habit of regular practice [38] [39].

If we consider the above from a research perspective, these mechanics transform abstract educational goals into concrete achievements. They offer a way of learning that can be broken into broadly defined, game-like timespans. Duolingo is thus in a position to synchronise the cognitive engagement associated with effort and achievement (progress and mastery) with motivational signals. This, in turn, keeps the users emotionally engaged [38]. The result is a learning journey where users feel a sense of accomplishment with each completed task. This qualitatively deepens their commitment beyond the underlying utility of the content.

➤ *User Motivation and Habit Formation:*

The app's gamified structure is designed to help users form habits with the use of consistency cues. Streaks, XP tracking, and timed day challenges do more than reward users: they also make it feel psychologically like you lost something if you skip a day, which keeps many returning to the app [3] [36] [37]. A lot of users express a personal connection to their streak, showing how gamification can weave learning into our lives. This experiential perspective is further informed by an understanding of how gamified elements can become more than reward mechanisms in the sense that these are psychologically meaningful indicators of user skill and investment into a system.

B. Health and Wellness Startup Case: Strava

➤ *Progress Visualization and Social Accountability:*

Strava which is one of the world's most popular fitness tracking apps, has established a socially-fuelled engagement ecosystem with gamification features such as activity segments, achievement badges and challenges. Rather than just logging activities, Strava lets you race on such segments and compare results with friends, local athletes or even global users [40] [41]. This competitive layer transforms physical exercise into a social activity where users are incentivised by self-improvement and competition against

others. Qualitatively, Strava's gamification encourages individual responsibility and communal participation. Users frequently say they find workouts more meaningful with the availability of social comparisons and public leaderboards, which create emotional incentives on top of physical health benefits [42]. In reality, gamification here functions as a combination of progress tracking and social accountability: on the one hand, people receive constant feedback about their performance; on the other, they feel accountable to their community [43].

C. FinTech Startup Case: Moven & CRED (Reward Structures and Trust-Based Engagement)

➤ *Reward Structures and Responsible Financial Behaviour*

When we discuss the financial technology space, we can observe that companies like Moven and platforms such as CRED have successfully integrated gamification techniques. These firms illustrate the ways in which gamification can be repurposed for fiscal wellness and trust-building [44]. To start with, Moven's platform has embedded financial health scores that reward users for positive financial behaviour. These include saving, balanced spending, and responsible financial decision-making. It is only through a gamified scoring mechanism that financial activity is reframed as a challenge [45]. It includes clear outcomes, encouraging users to develop healthier financial habits regularly and long-term [46].

In a similar fashion, CRED also integrates gamification techniques to lure its user base. It does so by gamifying the credit card payment system by awarding points for timely payments and prudent financial behaviour. This can then be further redeemed within the application for various integrated and third-party vendor offers [47]. Owing to this structure, there is a significant reduction in intimidation which is often associated with financial management. This, in turn, allows financial engagement to feel less transactional and more encouraging. If we look at it from a qualitative perspective, these systems reduce cognitive barriers to engagement. They achieve this by adding transparency, reward anticipation, and feedback loops that make finance feel meaningfully interactive rather than merely functional. In addition to this, within the domain of finance, a field where trust is of utmost importance, gamification can also act as a confidence builder. It allows for the rewarding of responsible behaviour with visible progression. This allows these platforms to help shift user perceptions from financial anxiety to empowered participation [48] [49].

D. Productivity / Social Platform Case: Habitica

One such example of the quest-based systems with community engagement is provided by the case study of Habitica. It is known as a productivity tool with a habit tracking system. It's the quintessential gamification, by turning everyday life into an RPG. The app lets users create and chat with their personalised avatars, accomplish real-life tasks as questions to earn experience points, rewards and in-game items. It's not anything like the old productivity tools that only depend on the to-do lists or reminders. Habitica immerses task completion in narrative and role play, making it anything but routine [50].

Another critical component of this app is the community built-in as a fundamental driver of engagement. In Habitica, members are able to form parties in which they can go on quests together and help each other take on common goals. This enables the application to transform individual productivity into a socially embedded experience. It is where peer engagement, encouragement, and shared goals contribute significantly towards overall objective of achieving a sustained and consistent long-term engagement [3][13]. Moreover, the platform also highlights the manner in which gamification can extend beyond individual achievement. This helps create collective meaning and accountability [51].

Users frequently express that Habitica's RPG element allows them to re-frame day-to-day tasks as something more than chores, but rather as achievements for their avatars or a way to represent who they are and what position they hold in the local community. This is a powerful glimpse of the manner in which storytelling and community engagement can turn the everyday act of running into something, rather than just doing it with no meaning behind it [52] [53].

VI. QUALITATIVE CASE STUDY ANALYSIS

By analysing these four cases, there are several common themes that can be observed between the cases that can help us to better comprehend how gamification stands out in different digital spaces:

A. Gamification as Behavioural Architecture

Looking across the cases, we see a pattern that seems to resonate for all the challenges. This paper aims to understand gamification as a behaviour architecture. It recognises how gamification is a system of cues, feedback loops, rewards, and progress markets. These further influence the manner in which users tend to interact with these platforms. These systems do not just reward through points or badges, but scaffold user activity in such a way that habit building, skill improvement and participant strategic action can be encouraged [33] [15] [2] [17] [3]. From language and fitness, to financial health and productivity, gamified design dictates when, how and why users engage over time.

B. Emotional Engagement Over Extrinsic Rewards

Points and badges are great to get people started, but deeper engagement often comes from an emotional connection - reaching pride from a learning streak, enjoying satisfaction at personal bests or feeling confident about having control over their finances [33] [41] [47] [38] [44]. These emotional experiences are what sustain engagement beyond the life of extrinsic incentives. They further lead to the development of intrinsic motivation, a fundamental insight for platform designers seeking sustainable interaction.

C. Narrative Continuity and Identity Formation

Platforms such as Duolingo and Habitica exploit continuity of narrative to embed users into a tale of advancing through levels and accruing achievements. In either instance, engagement isn't episodic but anchored in an identity: as a learner with a burning commitment or quest-

driven avatar. Storytelling, then, helps to provide flow and encourages the user to return for more than just extrinsic payoffs, instead of just maintaining a rewarding sense of self [29] [53] [38].

D. Social Interaction as an Engagement Amplifier

Strava and Habitica demonstrate that by adding social features like leaderboards, team challenges and public goals, engagement can be greatly increased. Social responsibility tends to incentivise individuals. This enables them to enhance their personal performance and make contributions at the community level. This is consistent with the broader social motivation literature, which emphasises relatedness as a paramount driver for persistence of engagement [41] [42] [51].

E. Risks of Over-Gamification and Fatigue

Despite the engagement benefits, all cases reveal potential risks. Over-gamification, in which users are driven to maintain streaks, play against one another endlessly, or accumulate points doggedly, can result in burnout and eventually disengagement. It is an argument for the need to introduce an ethical design of motivation, one that recognises well-being and autonomy [20].

VII. DISCUSSION

This section discusses and theorises the results of the previously discussed qualitative case study analysis in relation to relevant theoretical frameworks, as well as to extant scholarly literature on gamification and user engagement. Instead of repeating descriptive findings, the discussion goes beyond descriptive aspects and deals with meaning, the pattern found, implications and discusses within educational science more widely.

A. Interpretation of Findings in Relation to Theory

As we view the findings across the four case studies, we find a strong resonance with the established motivational and engagement theories. Among these, a particular alignment is observed with the Self-Determination Theory (STD), Flow Theory, and Behavioural Design Principles. Across all platforms, gamification approaches that facilitated autonomy (choice, self-paced learning), mastery (display of competence; feedback) and relatedness (socialising and community belonging) were correlated with deeper and more sustained user engagement. This is in line with the notion that optimum gamification fosters intrinsic motivation rather than just placing players on an external reward structure [24] [26] [22].

Flow theory is also reflected aptly in the design of progressive challenges and adaptive difficulty levels. It is most prominently visible in the immediate feedback observed in platforms such as Duolingo and Habitica. By using these features, users are able to experience a state of focused immersion. Within these, engagement is driven by enjoyment and mastery, rather than mere obligation. In a similar manner, behavioural design principles, such as cues, routines, and rewards, are also pretty evident in streaks, reminders, and progress tracking. These are key features specifically

embedded in health and productivity platforms. However, the qualitative findings reveal that users interpret these mechanisms not just as a behavioural trigger. Rather, they envision them as signals of personal commitment and identity. This allows them to extend theoretical comprehension beyond mechanistic behaviour change [51] [11] [38] [36].

Alongside this, narrative and social engagement theories further showcase the ways in which these platforms embed users within meaningful stories and communities [29]. Through narrative continuity, users are allowed to perceive engagement as an ongoing journey. Additionally, there is the side that social interaction works to motivate through accountability and mission. It is because of these features that gamification works at all three levels of the cognitive, emotional and social layers.

B. Startup-Specific Engagement Strategies

An important contribution of this study is the emphasis on the unique characteristics of startup environments, as opposed to mature digital platforms. For startups, gamification is not just a peripheral feature, but rather an essential customer engagement stratagem that's built into their product design and user onboarding process. The results suggest that gamification is used by startups to minimise friction, direct user learning and prompt habit formation in early adoption [34].

Though large-scale platforms might be more focused on optimising existing engagement metrics, startups use gamification as an experimentation and adaptation tool. The features are crafted, tested, improved upon or removed based on user feedback and behaviour. This agility enables startups to iterate on engagement architectures in response to changes in user needs. The cases also indicate that startups tend to employ gamification more integrally within user journeys rather than as stand-alone mechanics, confirming the need for coherence and contextualisation [9] [35] [2] [54].

C. Reframing Gamification as Experience Design

One of the most important findings from this research is that gamification should be considered a kind of experience design and not merely an application of game-based mechanics. Sustained participation across all cases was not due to the points or rewards, but by how these elements were woven into meaningful experiences that aligned with users' goals, identities, and emotions. Gamification served as an experiential scaffold, directing the users' attention to the ways they were making progress, were exerting effort and how far they had come [11] [3] [33]. Well-designed gamified systems allowed users to imagine themselves as students, athletes, prudent money managers or productive collaborators. This new conceptualisation reorients the focus in gamification research from 'what mechanics work' to 'how experiences are being built and given meaning'. It prioritises theory of mind, emotional resonance, and social context.

D. Alignment and Divergence from Existing Literature

The results confirm with the existing literature that criticises superficial, reward-based gamification and

supports intrinsic motivated design. Existing studies have warned about the dangers of learning designs that rely too heavily on extrinsic motivators, and this study adds weight to those warnings by demonstrating user fatigue and disengagement due to excessive or poorly calibrated gamification [20] [55].

However, at the same time, it also complements existing work by offering qualitative evidence from startup environments, an area less-studied in gamification research. In contrast with experimental designs, this study attends to the complexity of daily life, illustrating how the phenomenon unfolds over time whilst probing the ways in which individuals make sense and act upon gamified environments. Second, the focus on identity formation and emotional meaning provides a more developed conceptualisation of engagement that works in concert with predominantly quantitative forms.

VIII. IMPLICATIONS FOR PRACTICE

Based on the qualitative understanding and thematic impression, this section describes some practical implications for entrepreneurs in startups around responsible and effective gamification implementation in their products.

A. Design Principles for Startup Platforms

The findings suggest several design principles for gamified startup platforms. First, gamification should support user autonomy by offering flexible pathways rather than rigid task structures [23]. Second, platforms should prioritise meaningful feedback. They should also emphasise the use of tangible indicators of progress that will reinforce a sense of competence and mastery [56]. Third, make those social features aimed at encouragement and belonging, not unproductive competition [54].

Finally, the incorporation of gamification into digital tools should be context-dependent. These should also be highly consistent with the core value proposition of the platform. More generally, it is also required to prevent superficial or generic game-play conventions from eroding trust and watering down the user experience. This is especially true in considering the case for sensitive domains of user interaction, such as finance or health [15].

B. Strategic Use of Gamification

From a strategic perspective, gamification should be treated as a long-term engagement architecture. It should never be considered as a short-term growth hack. Startups should view gamification as a tool for guiding user journeys. It should be considered as a tool for supporting onboarding and reinforcing desired behaviours over time. This requires continuous evaluation of user experience. It also involves the willingness to adapt or retire gamified features. These predominantly includes the ones that no longer serve user needs [35] [25].

Ethical dimension is another one of the most crucial aspects in strategic gamification. Designers need to be aware of manipulative loops, overbearing pressure or unintended

psychological responses. Honest portrayal of gamified systems and the recognition that the autonomy of users must be respected are also crucial in order to sustain trust [57] [58].

C. Long-Term Engagement Sustainability

It is the sustainability of engagement that is reliant on dynamic experiences, and not static mechanics. As users age, motivation shifts from novelty and rewards toward meaning, identity and mastery. This means startups should build gamification systems that grow with the user, presenting increasingly complex challenges to them, richer narratives for them to explore or greater opportunities for self-expression [59].

The key point of the study is that long-term engagement comes not from maximising the frequency of interaction, but by creating experiences users believe are valuable, give them more power, and enable them to achieve their personal goals. Gamification as ethical experience design may be an ideal driver for sustainable user engagement in digital startup scenes [60].

IX. ETHICAL CHALLENGES AND DESIGN LIMITATIONS

Although gamification has shown promising results in motivating user activities on startup platforms, the application also brings in ethical implications and design limitations [13]. It is important from a qualitative perspective, as well, to ask how gamification works and at what cost it operates, in what circumstances and under what circumstances we should apply it.

A. Manipulative Design Risks

A more major ethical concern that arises with gamification is that of manipulative or coercive design. As noted, gamified structures contribute to behavioural triggers such as variable benefits, streaks, loss aversion, and social comparison - influences that may undermine users' actions in the absence of their voluntary volition. Unchecked, these mechanisms can also serve the needs of platforms (for example, increased time-on-site or frequency of interaction) at the expense of user welfare [17] [20] [59].

Engagement-maximising features tend to be embraced, often too zealously and without sufficient ethical questioning in startups with pressure to grow fast and limited resources. This can foster design practices that straddle the boundary between motivation and exploitation, especially when users are cajoled into compulsive usage rather than meaningful engagement. From the point of view of the researcher, this reiterates the importance of engaging critically with gamification as more than a benign tool because it is one form of behavioural power in digital environments [60].

B. User Autonomy and Consent

Another moral issue is the issue of the user's autonomy and informed consent. Gamified features are frequently woven throughout the fabric of platform experiences, so users don't entirely know where user experience design ends

and behaviour manipulation begins. This means people can be unwitting participants in systems that influence their behaviour, feelings and decision-making [61] [62].

Allowance of user autonomy entails giving them the possibility to opt out, disengage or change their interaction with gamification features without any negative consequences [23]. But, not every platform offers that kind of luxury, particularly when gamification is so hardwired into the core value prop. This raises questions concerning the extent to which engagement can be construed as truly voluntary when it occurs under these circumstances. Ethical gamification should enable, rather than imprison users in organised motivational frameworks, from an academic perspective [58].

C. Transparency in Gamified Systems

Transparency is a premise for ethical digital design, but it tends to be ignored in the context of gamified environments. The way points are calculated, ranks formed, or rewards algorithmically distributed is typically not shared with the users. This obscurity can undermine trust, especially in sensitive areas like finance, health, and education [58].

For startups aiming for a sustainable future, transparency is not just the right thing to do. Rather, it's strategically essential. Open and honest discussion surrounding the why and how of gamification builds trust and brings user expectations closer to platform aspiration. If we observe keenly from the perspective of a researcher, transparent gamification represents a shift from controlling behaviour to working collaboratively with participants, who understand and co-design their experience.

X. ETHICAL CHALLENGES AND DESIGN LIMITATIONS

While this study provides meaningful insights into the role of gamification in enhancing user engagement within startup ecosystems, it is important to acknowledge its limitations and outline directions for future research.

A. Methodological Limitations

This study takes a qualitative interpretivist approach, drawing on secondary data from sources such as platform analyses, founder stories, UX documentation and publicly available case material. Although this approach allows for a rich contextual understanding, it fails to directly capture user perceptions and lived experiences. No original ethnographic fieldwork or primary interviews means that there is little account of how users personally understand and feel about gamified systems. Qualitative results also rely on interpretation and can be subject to researcher bias. Even though there was an active engagement in reflexivity, some other interpretations could be produced by the same cases using different analytical dispositives.

B. Contextual Boundaries

The study targets mainly digital startups in a tech-heavy environment such as EdTech, HealthTech, FinTech and productivity platforms. Thus, the results might not be totally

applicable to non-digital services, legacy organisations or cultures in which user motivations and engagement standards are different. What's more, startups are also defined by a quickly changing iteration process and product strategies. The gamification trends in place at any given time can vary dramatically as a firm grows, pivots, or matures. This time restriction supports the notion that gamification in entrepreneurship is context-specific and dynamic.

C. Future Research Directions

Investigations would also benefit from using longitudinal study designs to explore how gamified engagement changes over time and how users react to prolonged exposure. In fact, mixed-method designs which include qualitative insights alongside behavioural analytics may provide us with a more comprehensive knowledge about experiential depth and measured outcomes. In addition, other areas of further investigation may include ethics and governance frameworks to support the development of gamification methods in high-risk domains, including mental health finance and civic platforms. Cross-cultural comparative studies would be useful to learn how cultural norms might affect the experience and effectiveness of gamified engagement. Lastly, user-centred participatory research may contribute to repositioning gamification as a co-designed experience instead of a top-down engagement instrument.

XI. CONCLUSION

The focus of this work was to investigate gamification as a strategic design for increasing user engagement with startup platforms, purely based on the case-based qualitative research approach. The studies indicate that when used properly, gamification transcends more simple rewards and treats to become a behavioural and experiential infrastructure.

A. Summary of Key Insights

It was discovered that gamification in a variety of startup situations influenced user engagement through narrative coherence, emotional connection, interactions within social structures, and identity formation [33] [27]. Achieving longer-term engagement no longer requires the priming of extrinsic motivation. Instead, it flowed naturally from intrinsic motivation-habit-accountability loops and towards a shared community. However, the research also highlighted important risks of over-gamification, such as user fatigue, ethical concerns and loss of authenticity [59] [61].

B. Contribution to Qualitative Gamification Research

This study adds to this growing body of qualitative research on gamification by foregrounding the experience of users, meaning-making and contextual improvisation over sheer quantitative measurement. Through the startup-centric view, it also brings forward how resource constraints, growth mandates, and product-led strategies govern the design and deployment of gamified systems [9] [35]. Crucially, the work positions gamification not as a tactical extra but as part and parcel of digital experience design that shapes how people engage with platforms over time.

C. Final Reflections on Startup Innovation and User Engagement

To conclude, the potential of gamification for startups that want to stand out in a crowded digital market is huge. The real value is not in maximising engagement at all costs but supporting meaningful, ethical and sustainable relationships between platform and people. Looking from a researcher's point of view, the future of gamification in startup innovation lies in finding this sweet spot between behavioural effectiveness, human-centred design, transparency and respect for the law of user autonomy. When thoughtfully designed, however, gamification can be a bridge between the innovations we've realised in technology and changes we seek in human behaviour, one that, rather than simply capturing attention and exploiting individual behaviours on behalf of business objectives, is instead capable of moving them along from an authentic point within the individual.

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