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THE PROSPECTS FOR DIGITAL GAMING

LEE WILLOWS, KIRSTIE HEPBURN,
PROFESSOR PAUL DOLAN SEPTEMBER 2025



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Introduction

Generation Alpha (GA) born between 2010 and 2025 is the first generation to grow up in a digital ecosystem. They live with algorithms determining what content they see, gamified education, and social media interaction – they are [digital natives](#). There is so much discussion and considerable concern about lives lived online as compared to in person (Haidt, The Anxious Generation). The impacts of further advances in gaming and betting have not been the focus of much discussion to date. This paper considers how embedded gambling behaviours (in many other activities not related to regulated gambling) will change this generation's attitudes, thinking and behaviours over time.

Gambling in the UK is divided into three categories: legal and regulated gambling that falls under the UK Gambling Commission (UKGC); grey market gambling which is provided and enabled through unlicensed operators targeting UK customers; and illegal black markets. These boundaries are becoming blurred with the growth in AI, crypto integration, and influencer marketing. When considering GA's relationship with gambling, this paper explores the gradual merging of gambling and gaming experiences and mechanisms.

GA's daily activities entail educational applications, streaming services, and multiplayer games, usually accessed via smart phones. [EMB Global \(2025\)](#) states that 76% of the GA's children can use digital devices every day, and their relationships with technologies start as early as the age of two. Their learning and entertainment habits feature gamification at multiple touchpoints. Apps such as Duolingo, YouTube Kids, and Roblox include point systems, winning streaks, and the ability to unlock rewards as forms of sustaining interest.

The challenge

Such mechanics are reflective of the central attributes of gambling, risk, reward, and anticipation, resulting in early links between behaviour, “wager-related” activities, and prizes. Indeed, [Gen Alpha's most “relaxing” pastime](#) is gaming as 21 out of 100 GA spend their free time on games, often interacting with their friends (real life or online friends) within those games too.

Many of these games revolve around microtransactions and loot boxes. These options enable the players to buy random rewards or cosmetic improvements with real money. The psychology of such systems is very strong: variable-ratio schedules of reinforcement, akin to gambling, encourage the release of dopamine, via random rewards. Rewards are easily displaced by the anticipation of a rare event and the fulfilment of this anticipation adds to the draw.

Additionally, visual or auditory stores, e.g. flashing lights, celebration sound settings, and haptic indicators (i.e. physical sensations, often vibrations or subtle movements, used to provide feedback to a user, enhancing their interaction with a device or environment) are meant to intensify emotional reactions. Nerve cells in the reward system of the brain detect those stimuli and it forms a [feedback loop](#) that promotes further spending. To GA, [whose brains are not fully formed](#), including the development of impulse control and risk analysis, such mechanisms can be risky, especially when such games do not have the customer protections provided by legalised gambling.

Moreover, the desirability of rare items in loot boxes, as well as gaming achievements, bring about social comparison. Young players can be motivated to use their money to stay ahead of their peer influencers. The environment is reinforced by this comparison culture with, at best, very limited awareness of the risks. In-game bonuses are rarely controlled or regulated, which could allow young or vulnerable players to be put at risk of financial harm and addiction.

The design features of many of these games (rapid play, near-misses, variable rewards) are designed to stimulate the brain and cause a rush of adrenalin and excitement. The part of the brain known as the amygdala is central to fear conditioning and threat detection. In gambling contexts, it helps assess the potential risks and losses associated with betting decisions. When functioning normally, amygdala activation can serve as a “brake” system, generating anxiety or fear responses that might discourage risky gambling behaviour. When highly activated by the excitement of potential wins or the stress of losses, it

can override the more considered decision-making processes in the prefrontal cortex.

Research shows the amygdala responds strongly to “near-misses” (like getting two out of three matching symbols on a slot machine). These near-miss experiences activate the amygdala’s reward circuitry and can intensify the motivation to continue gambling, even though they represent losses ([Clark et al, 2018](#)). During gambling losses, amygdala activation can trigger stress responses that increase the urge to continue gambling. This can contribute to “loss chasing” behaviour, where people try to recover their losses. These reward-chasing mechanisms tend to be built into the games, to keep players coming back. Unlike in regulated gambling, the platforms are not required to provide safer play tools or risk awareness.

Microtransactions and loot boxes are a staple of modern video games, enabling players to buy randomised in-game assets in the form of skins, weapons, or power-ups with in-game money or real money. Though at first presented as forms of monetisation to fund the games, loot boxes have attracted criticism due to their similarity in process to gambling. As stated by [Xiao et al. \(2024\)](#), loot boxes satisfy some of the characteristics of gambling, which include money transactions, the possibility of receiving valuable rewards, and being based on chance.

Loot boxes have a variable-ratio schedule of reinforcement, as do slot machines, which provide unpredictable rewards. This variability triggers the dopamine that reinforces the habit and encourages repeat behaviour. Opening loot boxes can be compared to gambling thanks to feelings of anticipation and a rush when it contains a desirable object, which in turn builds a feedback loop. [A report by the Royal Society](#) identified that less than 10% of iPhone games in the top-grossing category with loot boxes adhered to UK advertising guidelines by displaying the odds of the loot box, and none required parental consent before allowing purchases to underage gamers.

These digital experiences can provide GA with potentially harmful gambling-like activity, within the context of limited regulatory oversight and no information or safe play tools. The use of gamified systems, social validation, and the potential development of problematic behaviours warrants further exploration of how to mitigate harms. And not just for GA, but for all of us across the generations.

The gamification of gambling

The gamification of gambling is the utilisation of video game mechanisms (experience points (XP), missions, and tiered rewards) into online casino conditions. This trend is changing the way people perceive gambling, and the increased interactivity and quests [appeal to younger people](#). Examples include special missions for online casinos, around wagering a certain amount on a [slot machine or winning](#) a certain number of hands on blackjack, in order to unlock a bonus or XP. The more XP a player has, the higher their level goes, and levels are unlocked such as exclusive promotions, free spins, or VIP rewards. These tools give a feeling of progress and success that encourages the user to play regularly.

The inclusion of leaderboards and tournaments with prizes mimic the social environment of multiplayer games, and promote gambling as a group experience. Avatars and profile customisation also add to the immersive feeling.

The distinction between gaming and gambling has blurred to the extent that betting on fantasy sports and skins has emerged. In skins betting, the customers place bets on the result of a game or event using cosmetic items, which are commonly acquired by loot boxes. These goods may bear actual value, leading to a secondary market that lies beyond regulatory oversight. Meanwhile, fantasy sports have integrated financial wagers, making them a game-gambling hybrid.

These hybrid platforms contain aspects of gaming, gambling and social media. The portals provide live-streamed games, crypto functions, and gamified user interfaces. Players can get tokens, do missions, and become part of an online community while gambling. These platforms normalise gambling by referring to it as a game, which can stimulate users to spend more time playing. Users, especially younger ones, can have difficulty separating skill-based and chance-based outcomes, which distorts their judgment and could expose them to greater risk.

With the emergence of the metaverse, online gambling is likely to change dramatically, and people will be able to play in a more immersive form, communicate using avatars, and visit virtual casinos simulating real-life conditions. These platforms combine virtual reality (VR), augmented reality (AR), and blockchain in order to provide dynamic and personalised gambling experiences. Metaverse casinos enable clients to explore virtual worlds, sit down at tables, and communicate with other users in real-time.

Avatars further personalise the experience and changes the transactional nature of gambling into a more social experience. While the experience may be personalised, the gateway to use is anonymised, with users able to remain anonymous, get almost instant payouts, and avoid stringent regulation. Instead of identity and affordability checks, players can deposit, spend and win cryptocurrencies. While this provides added privacy, it presents additional risk for the identification and protection of under-age or vulnerable users.

Children can easily form avatars and get into the metaverse casinos without showing their ages or identity. As a result, moderators cannot always identify and eliminate the participation of children and teenagers, particularly if participants use [voice modifiers](#) or different pseudonyms. The anonymity of this environment, coupled with the promise of virtual rewards and socialisation, adds to the risk.

Algorithms are used to target individual users by studying their behaviour patterns to offer scripted and personal promotions, game recommendations, and interface modifications. Individual rewards in the form of limited time bonuses and focused nudges also have the capacity to change stake levels and increase the amount of betting, which also could increase the possibility of addiction.

As an example, if one player shows signs of [disengagement](#), the system may provide them with a bonus or open start a new mission so encourage engagement. Any benefits to user experience are offset by concerns over consent. Metaverse gambling is not fully developed as a regulated activity. It remains largely inappropriate to use traditional frameworks to manage decentralised platforms, avatar-based interactions, and blockchain transactions. This means that most metaverse casinos sit on legal grey areas, ignoring consumer protection regulations and leaving users at risk of being defrauded, manipulated or developing problematic behaviour.

Illegal markets

Illicit online gambling businesses in the UK are growing exponentially, with figures estimating [1.5 million British residents](#) have gambled on black market platforms. This rise can be attributed to a mix of regulatory constraints, customer restrictions, and the promise of higher rewards and benefits among other reasons. With the UKGC implementing a new system of compliance, legal operators are coming under intensified scrutiny and therefore users, especially those of a younger demographic, are seeking recourse to black market sites with anonymity, limited regulations, and gamified environments that appear to be identical to legitimate sites and apps, contrary to those provided by the UK regulators. According to a [recent report](#) released by the Gambling Commission, a sizeable portion of the users did not know that they dealt with unlicensed operators.

One key factor driving the use of black markets by GA is peer influence, where access to unlicensed sites could be provided via [social media influencers](#), affiliate URLs, gaming livestreams, online communities, or other promotional content. Typically, black market gambling can be found in messaging apps, such as Telegram and Discord, alongside access to crypto casinos, betting rings, and gamified apps that mimic legitimate gaming apps. For younger users, familiar with many of these channels, they can be desirable because they are easy to access and anonymous.

Decentralised technologies have only served to hasten the migration to the black market. Through blockchain and pseudonymous wallets, crypto casinos or gambling apps enable users to avoid age checks by accessing the games across decentralised connections. These sites can be located outside the jurisdiction of UK, and use loopholes in jurisdiction in another country, such as Curaçao or Anjouan, to operate outside the UK's consumer protection laws.

In addition, VPN usage has become common among GA users to access [geo-restricted gambling](#) content that makes regulations even more difficult to enforce. Black market operators offer customers better

bonuses, quick withdrawals, and lax or non-existent KYC (Know Your Customer) practices. Younger users find these offers appealing for their efficiency, anonymity, and gamified user experience as opposed to the restrictive (but protective) measures. The development of “pop-up” casinos, unlicensed, short-lived platforms that disappear after the users have made deposits is another area for concern, with no consumer protection or legal recourse in most cases ([Casino Professor, 2025](#)).

Unlicensed gambling sites have many risks – especially to younger audiences. Users have no regulatory supervision, and are thus vulnerable to scam activities, such as manipulated games, theft of personal data, and money theft. Black market platforms do not have to use anti-money laundering measures, store customer data safely, or offer arbitration in case of dispute. Gambling-adjacent mechanisms such as loot boxes and other forms of randomised rewards are rarely subject to parental controls or transparency around the risk and reward. Research shows that 3 out of 5 of the highest grossing iPhone games in the UK contained [loot boxes](#) and they are readily available to younger users.

In addition, the risks are enhanced by the immersive and gamified format of black-market platforms. These formats encourage long and compulsive episodes of gambling and operators are under no obligation to provide the user with interventions over playing time, deposit limits, or provide any form of harm detection. Furthermore, as there is no regulatory oversight, users who develop problem behaviour have no exposure or easy access to sources of help.

Moreover, the [unlicensed platforms](#) are increasingly associated with such activities as money laundering, identity theft, cyber extortion and organised crime. The National Crime Agency estimates that approximately £1.5 billion is laundered every year through gambling activities in the UK with most of them being via uncontrolled avenues. The black market is a big problem but it emanates in so many ways from the appetite for gaming, legal or otherwise.

Existing protections

The UK Gambling Commission (UKGC) has implemented five main changes to raise standards. First, more stringent identity-checking procedures: A new age verification procedure will require every casino licensee to complete test purchasing and check the age of their consumers who look lower than 25 years of age (as of August 2024). Second, deposit and financial checks: From October 2025, operators will have to require users to set financial limits regarding their initial deposit and remind them of their limits after every six months. Third, prohibition of autoplay mode and game intensity: This will comprise such measures as ban on [autoplay mode, turbo spins](#) and celebrations in the case of loss games. Fourth, the statutory levy: A statutory levy of the gambling profits which will raise an annual total of 1£00 million is to be used to fund the research, prevention and cure of gambling harm instead of the previous system, which was on a voluntary basis. Fifth, AI risk profiling: By relying on AI technologies, operators will find it easier to analyse the behaviour of players and provide interventions as soon as financial vulnerability is (or may be) detected.

All these reforms rely on proactive measures by the regulators and the operators, with more real-time monitoring and user empowerment. But they may exclude GA by not addressing the environment in which they are playing. This requires additional and more nuanced interventions and regulations.

Lawful gaming websites are quickly becoming familiar with the demands of GA and the way they stay connected with their peers through a variety of online social media platforms. There are three main developments. First, mobile-first: UK operators will move to a mobile-first model, with smooth apps that have up-to-date features, including [biometric authorisation and push notifications](#). These services serve the needs of multitasking individuals who enjoy brief, active periods of usage on the way to education or in between activities. Second, gamified gambling experience: the betting industry is now integrating gamification for example quests, XP levels, and loyalty rewards. Third, social integration: the addition of chat rooms and leaderboards where people in the community can compare and share weapons, personalities, and earning capabilities through multiplayer missions.

It is easy to see how these developments could lead GA into harmful and addictive behaviours in ways that they would not predict and in many cases not even be aware of. The risks increase considerably in the presence of unregulated markets.

Future prospects

The distinction between gaming and gambling has blurred, but the regulatory environment has not developed at anywhere near the same pace. Loot boxes, skins and the like share many of the characteristics of [conventional gambling](#), both in terms of financial interaction, random results, and psychological reward. Yet they do not always fall within the domain of current gambling laws. The UK's Gambling Commission has been more conservative, only licensing loot boxes to real-money trade, but that has left a wide range of in-game monetisation tools unregulated. Although AI has the potential to identify the presence of harmful gambling behaviour and provide effective and timely interventions, it can also be used to manipulate responses. Nudges, such as bonuses and game suggestions, are tailored to each individual, and they can nudge a player into longer game sessions and ever-greater expenditure.

Educating GA to the challenges of gambling-like environments is essential. Schools and parents can play their part, including teaching students how to identify persuasive design, understand probability, and learn critical assessment of online information. These lessons can be made real with role-playing scenarios, data analysis exercises, and guest speakers who work in the recovery community. Parents should also be brought on board and encouraged to have open conversations about the length of screen time, application permissions, and money spent online. The uses of parental controls and content filters can support dialogue and monitoring.

A public health campaign could be created to target Gen Alpha and their guardians. The success of the stigma reduction campaign by GambleAware has normalised the [harms of gambling](#) and promoted asking for help when it is needed. Such campaigns should be co-created with young people and families and communicated through familiar stories and available platforms to ensure the reach and effectiveness.

But – and this is a very big but – education and information works best on those who are better educated and informed to begin with. And there are limits to how far willpower can go in changing behaviours. Design power is a much stronger force, and those designing the games recognised a long time ago. Those at the heart of the problem must be at the forefront of the solution.

A cross-sector regulatory approach to address these gaps is needed. This requires collaboration between gaming designers, licensing authorities, educators, child protection associations, and health workers in society. Consider the Digital Trust & Safety Partnership which improves collective governance approaches and focuses on proactive design and [transparency in digital spaces](#). In the absence of such cooperation, regulatory action can be fragmented and reactive instead of being proactive.

Most players are ignorant of the various ways their data can be used to make gambling easier or harder. This raises the question over whether consent is informed, as well as issues over whether there is human oversight or parental controls, how the collected data is used, and whether there are sufficient opt-out opportunities, particularly when dealing with children and teenagers. Tools that can be applied include age-based privacy setting, content filter, and the restriction of persuasive design mechanisms designed to appeal to younger users. Developers should not target emotions, like creating a false sense of urgency so that young users are more likely to buy to get a sense of reward.

Regulators are considering the creation of sandbox environments - zones where new technologies could be tested before rollout. Through these [sandboxes](#), it will be possible to engage stakeholders, conduct risk assessments, and co-create protection and regulatory measures. These sandboxes should also consider how these innovations will affect minors. Regulatory agencies should also work with other governments to contain cross-border gambling habits of online gambling platforms.

The gaming and gambling sectors should adopt ethical design codes that focus on the safety of the user - particularly younger users. This involves introducing effective age restrictions, open data practices, and other design elements that do not encourage compulsive behaviour such as urgency-based promotions or mock social rewards. Ethical product design must be considered an industry standard, not an exception. Increased transparency is required; operators must explain the way their algorithms target users; they must also reveal what data gets gathered and how it is used and stored.

There is also no longitudinal study of the gambling practices of GA; most current research concerns teenagers or young adults and there is a lack of knowledge about the influence of early experiences with [gambling-like characteristics](#) via smart devices. A longitudinal study could measure how these early experiences could lead to changes in behavioural patterns, cognitive growth, and psychosocial effects. Further research could measure the effectiveness of protective factors, including parental support, digital literacy, and peer support, which can be used to reduce the odds of the risk of gambling.

Conclusion

GA faces a complex landscape where gaming opportunities intersect with significant gambling-related risks. Gaming can provide young people with enhanced digital literacy and technological fluency, while developing strategic thinking, problem-solving, creative expression and social skills. But the blurred lines between gaming and gambling brings about added risk. According to [Gambling Commission figures in 2024](#), the number of young people experiencing problem gambling increased from 0.7 per cent in 2023 to 1.5 per cent in 2024, with a further 1.9 per cent experiencing “at risk” gambling.

One of the most concerning trends is the proliferation of loot boxes and similar mechanisms in mainstream games. [A large-scale survey of gamers](#) found evidence for a link between loot boxes and problem gambling, while these mechanisms are generally not regulated despite being widely available on mobile devices, including to young children. [Research shows](#) sealed mystery boxes and other chance-driven, casino-like rewards are now recognised as potential contributors to gambling addiction among children and teens, many of whom do not even realise they’re gambling.

The real challenge lies in preserving gaming’s educational and social benefits while protecting young people from exploitative monetisation strategies that blur the lines between entertainment and gambling. Urgent action is needed from regulators, parents, and the gaming industry to establish appropriate safeguards without stifling the positive aspects of gaming culture that can benefit GA’s development.

References

- Ante Up Magazine. (2025, July 31). [Using AI to predict player behavior and personalize gameplay](#).
- Bolat, E., et al. (2025). [Influencer-driven gambling content and its impact](#). Journal of Gambling Studies.
- BGaming. (2025, May 8). [Metaverse casino: The future of online gambling](#).
- Breaking the Lines. (2024). [Blurring lines: The future intersection of gaming and gambling](#).
- BI Team. (2025, January). [Understanding gambling through social media in Great Britain](#).
- BMMagazine. (2024, November 28). [The rising threat of the black market in the UK gambling scene](#).
- Casino Professor. (2025, April 21). [Unregulated gambling in the UK: A multi-perspective analysis](#).
- Cointelegraph. (2025, July 28). [VPN-friendly casinos: 10 best VPN-friendly casinos in 2025](#).
- Cryptogambling.com (2025, July 14). [Crypto gambling in the UK: Legal rules & access to offshore casinos](#).
- Centsports. (2025). [The evolution of betting trends: What’s changing in 2025?](#)
- EMB Global. (2025, January 30). [Gen Alpha: The influence of Gen Alpha on tech and marketing trends](#).
- Gambling Commission. (2024). [Evidence theme 6 – Illegal gambling and crime](#).
- GeniusCrate. (2024, November 20). [The rise of gaming celebrities: Uncovering the influence of streaming platforms](#).
- Kim, H. S., & King, D. L. (2020). [Gambling-gaming convergence: New developments and future directions](#). *International Gambling Studies*, 20(3), 373–379.
- Kolandai-Matchett, K., & Abbott, M. W. (2021). [Gaming-gambling convergence: Trends, emerging risks, and legislative responses](#). *International Journal of Mental Health and Addiction*, 20, 2024–2056.
- Lee, H. J., & Lee, G. (2025). [Pathways to understanding problem gambling among adolescents](#). *BMC Public Health*, 25, Article 2144.
- Larche, C. J., Chini, K., Lee, C., Dixon, M. J., & Fernandes, M. (2021). [Rare loot box rewards trigger larger arousal and reward responses, and greater urge to open more loot boxes](#). *Journal of Gambling Studies*, 37(1), 141–163.
- Mittal, V., Chakrabarti, N., & Mehta, H. (2024). [Generation Alpha’s engagement with digital media and technology](#).
- Sheffield Hallam University. (2021). [Exposing the hidden costs of gambling](#).
- Udonis. (2025). [Gen Z vs Gen Alpha: What marketers should know in 2025](#).
- World’s Coolest Nerd. (2024). [The psychology of in-game purchases: Loot boxes and micro-transactions](#).
- Xiao, L. Y., Henderson, L. L., Nielsen, R. K. L., & Grabarczyk, P. (2022). Loot boxes: [Gambling-like mechanics in video games](#). IT-Universitetet i København.



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Community Care Gaming, 124 City Road, London, EC1V 2NX
E: hello@communitycaregaming.org | T: 0203 488 5227 | www.communitycaregaming.org

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