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Building trust in EdTech: Lessons from FinTech

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Financial technology (FinTech) in the UK has now matured to a level where it is seen both as a credible threat to established financial services and also to the future of financial services. It offers lower rates and fees, a wider range of functionality and features, more convenience and more interesting user experiences. For investors, it offers potential material returns for less initial outlay. For regulators, it has the potential to provide more financial services to more people. And for established financial services firms, it offers new markets and a new set of tools to attract and manage consumers (Browning & Evans, 2021). Total investment in British FinTech jumped more than 217% to US$11.6 billion in 2021, second only to US firms globally, which saw US$46 billion of investment (Innovate Finance, 2022); US$24.3 billion was invested across Europe, with the UK attracting nearly half of total investment.

FinTech uses technology to improve financial services delivery through lower barriers to entry, lower running costs, increased access to more consumers and increased convenience for both the supplier and consumer. It encompasses technology-driven and technology-enabled businesses, from established financial services software vendors to emerging digital service providers, and also discrete

FinTech sectors such as Insurtech, RegTech and PayTech, which focus on specific areas of the financial services value chain. Although it originated back in the 19th century, ongoing developments, such as electronic fund transfers through FedEx and Morse code, credit cards, ATMs, Telex, SWIFT, Nasdaq and, of course, the personal computer (PC), have demonstrated the close relationship between technological innovations and financial services.

And yet, for all that growth and expenditure, trust in financial services in the UK is still generally low (47% of consumers trust any financial services, 45% trust only traditional financial services and 28% trust only FinTech; Edelman, 2021). Developing trust in digital industries is hindered by their reliance on complex technical innovations that have had negative media coverage, such as artificial intelligence (AI), machine learning, distributed ledger technology, blockchain, peer-to-peer platforms and crowd-funding (Browning & Evans, 2021). Less trust in an industry is ultimately the biggest growth obstacle. Having a better product, service, reach, cost, support, etc. are key contributing factors to success, but unless people trust the firm, they won't trust it can deliver these factors.

Educational technology (EdTech) and FinTech share common concepts. They both grew out of long-established industries and use modern technology to deliver their services with certain cost and convenience savings. They both offer fundamental and additional services. Both offer business-to-business (B2B) solutions across the incumbent value chain (e.g., Stripe in FinTech and Sprint-Education in EdTech), as well as business-to-consumer (B2C) offerings (e.g., business-to-adult consumers – Revolut in FinTech and Codeacademy in EdTech, and business-to-child consumers – GoHenry in FinTech and Kuato studios in EdTech). EdTech, like FinTech, however, has a trust problem (EdTech Impact, 2021).

There are three key approaches to understanding trust drivers in FinTech (and EdTech): (a) trust in the rules, regulations and supporting infrastructure underpinning the market; (b) trust in the protection of the tools and techniques to look after the consumer;[†] and (c) trust in the approach and focus of the firms delivering the services and products.

These three approaches, or layers, legitimise the industry and increase consumer trust. So what can be learned by EdTech from FinTech's experience? We will now explore some of the key lessons learned and see what value FinTech can bring to EdTech.

Improve trust in the rules

Industry support through government oversight and self-regulation has gone a long way to legitimising FinTech as trustworthy. Although there is no single UK or international regulatory body responsible for FinTech, there are multiple stakeholders and existing or proposed legal frameworks that provide a regulatory roadmap for the sector. These include the Information Commissioner's Office (ICO), Financial Services Compensation Scheme (FSCS), Financial Ombudsman Service, Prudential Regulation Authority (PRA)/Bank of England and Financial Conduct Authority (FCA). Within these there are now dedicated programmes for FinTech, such as the FCA's Innovation Hub and Regulatory Sandbox, Payments Systems Regulator (2015), Bank of England FinTech Accelerator (2016) and the Cryptoassets Taskforce (2018).

In addition, while some aspects of the FinTech environment are specific to that sector, other critical aspects – such as data and AI – are cross-cutting issues that are also relevant to other economic sectors, with their own rules and regulations (Insurtech, etc.). Regulators are also working to clarify which financial products and services fall within their remit (e.g., the FCA's 2020 *Perimeter report*) sets out several issues relating to its scope regarding oversight for FinTech, including cryptoassets and social media companies and online retailers providing financial services).

For self-regulation, the UK has bodies such as Innovate Finance and FinTech Alliance, as well as existing incumbent financial services bodies that promote their firms' interests (British Bankers' Association, UK Finance, etc.). The UK Government has also invested both in FinTech and in organisations working to develop start-ups and scale-ups, and

† We use 'consumer' here to mean the end user of the FinTech/EdTech product, whether these are schools, adults or even children.

has convened various stakeholder groups and developed international partnerships to promote the sector.[†] The UK Government has undertaken studies that legitimise FinTech, such as the Kalifa Review of UK FinTech (Kalifa, 2021), the UK *FinTech State of the nation* report (Department for International Trade, Innovate Finance, 2019), the Tech Nation report (Tech Nation, 2021) and the House of Commons report *FinTech: A guide to financial technology* (Evans & Browning, 2021).

As any sector becomes more prominent and complexity increases, so, too, does the level of scrutiny applied to it, and the societal and business impact of scandals and failures pertaining to it (Plaid.com, 2021). Eighty-nine per cent of UK adults lose trust in a company following an IT failure or technical problem, and 51% would consider switching banks following issues with their IT systems (ProBrand, 2020). What impacts consumers' trust in these circumstances, however, is the reaction of the government and self-regulating bodies to these scandals and losses. Since 2008, financial services have received their fair share of scandals and failures, although many of these currently relate to IT and cyber failures (enough to have their own government report; see House of Commons Treasury Committee, 2019).

Strong FinTech growth has resulted in some failures along the way, some of which relate to lack of funds (37coins), bad business models (Flowtab), management oversight/governance (N26) and fraud (Wirecard). We've also seen that the fast growth of FinTech along with market pressures has resulted in some (allegedly) questionable practices such as the recent investigations into money-laundering charges for Monzo and Revolut, and the FCA's interest in payment institutions with foreign ownership (Griffin, 2022).

What EdTech can learn from FinTech is that while having a mix of regulations, self-regulation and oversight does work to protect consumers to a large extent, it can become overly

† For example, British Business Bank programmes, Department for Digital, Culture, Media & Sport (DCMS) and HM Treasury funding for Tech Nation, Inclusive Economy Partnership (IEP), AI Sector Deal, 'FinTech bridges' with Hong Kong, South Korea, Singapore, China and Australia, as well as the UK-Africa FinTech Partnership, Insurtech Board, Asset Manager Authorisation Hub and government backing to the Investment Association to develop a FinTech accelerator for the asset management industry called Engine.

complex and difficult to manage. It is more important to have effective industry protection in EdTech (such as dedicated forums, industry bodies, etc.) given the more vulnerable nature of the end users and the different motivators between EdTech firms and end users (profit versus education), otherwise this could lead to scandals, failures and monopolistic and monopsonistic[†] behaviours impacting its development (Noula, 2021).

Regulation is typically not as agile as self-regulation, especially when mixing new regulations with amended old ones. Government oversight must be carefully balanced as to be a suitable deterrent for some firms without stifling others. It is only when all the parts are working together that we can expect to see a reasonable level of protection. Both FinTech and EdTech would then benefit from a chance to create a robust yet workable regulatory framework that includes self-regulation and considers the various industry nuances.

Improve trust in the protection of the tools and regulations

The approach and steps taken by firms in how they use consumer data and how they protect it from others is key in building trust in digital firms. This is especially true in a world with third-party interconnected systems and different systems by different developers working together, leading to compatibility problems. In 1973 Richard Serra and Carlota Fay Schoolman broadcast a short video titled 'Television delivers people', in which they paraphrase the quote '[if] you're not the consumer, you're the product'. The way a firm treats its consumers is reflected in the way consumers trust the firm. For digital firms especially, consumers care about how their information is managed. Where the processes or technology are complex (e.g., encryption levels, cloud-based computing, etc.) and consumer understanding is low, consumers will look to the firm and industry to protect their data.

In its annual report on data breaching, IBM found that for firms globally the average total cost of a data breach was US$4.24 million, of which US$1.59 million (38%) came from

† Monopolistic behaviour is when there is only one seller of the supply of or trade in a product or service.

lost business costs (IBM Security, 2021). Security, privacy and digital identity (SPD) are thus key concepts for improving trust in a service or product. Consumers have to trust that their information and identities are being safeguarded, and that they can entrust the firms with sensitive information. SPD concerns are also relevant in EdTech, where personal data is collected, stored and processed using multiple systems and third parties (26% of further education colleges are [cyber]attacked at least weekly – as are 6% of primary schools and 15% of secondary schools; DCMS).

So how can FinTech and EdTech legitimise themselves and allay consumers' fears? Consumers' confidence can be boosted by demonstrating good SPD practices, which includes considering SPD implications at every stage of developing a new product or service, being upfront about how they're processing consumer data (in line with the General Data Protection Regulation [GDPR] and other educational and financial services regulations on protecting consumer data requirements, for instance) and promoting the extra steps they're taking to keep personal information safe.

From a technical point of view firms should have robust security and privacy measures in place, including (but definitely not limited to) regular vulnerability scanning, scalable architecture, biometrics, passwords, one-time passcodes and more than one verification gateway based on different principles and technologies. However, SPD compliance is not static. Firms must have both the desire to protect consumers' information and the technical knowledge/infrastructure/support to cope with current and future attacks. They must keep innovating their technical defences and protection as attackers will do the same. But digital firms should also take a proactive response by investing in regular training for their staff –84% of UK data breaches are down to human error (Egress, 2021).

The increased pressure on FinTech and EdTech to deliver strong SPD measures, however, must be counterbalanced against increased inconvenience – not alienating consumers while simultaneously considering user control and consent. There is significant pressure on firms to compress the due diligence process into a short amount of time, leading to significant resistance from financial institutions to the type and extent of diligence that regulators require. In fact, in 2022 the UK Government announced legislation to increase trust in digital identities by making firms obtain a Trustmark to show they could handle people's identity data in a safe and consistent way, and a new Office for Digital Identities and Attributes is to be established to oversee strong security and privacy standards for digital ID (DCMS, 2022). There have also been various European (Open Access Government, 2022) and private self-regulatory initiatives (Hancock, 2020). Linked to this is similar research into the 'digital divide', where consumers are unable to access financial services because they lack internet access. How FinTech is actively dealing with digital illiteracy, or consistent access to the internet, is an excellent lesson to pass on to EdTech where the most deprived children are at real risk of being disadvantaged (Saka et al., 2021; Vissenberg et al., 2022).

Building trust through good customer service

Following the 2008 global financial crisis, the housing crash and the subsequent international recession, regulators focused on restricting financial services activities with an increased emphasis on risk and regulatory compliance, which led, in turn, to an increase in technology spending. However, consumers also wanted better consumer experiences (i.e., more convenience, more support or a more entertaining consumer journey). Consumers change firms when they trust that the new firm can offer them a product or service that is cheaper, more convenient, gives them more choice or whose approach is better suited to their needs (PwC, 2021).

What has worked for FinTech companies is knowing who their consumers are and what drives them to use their product rather than traditional financial services. FinTech has learned to react quickly to consumer feedback and adjust its services accordingly. It epitomises agile development wherein it focuses on short sprints with specific goals along with regular consumer feedback so that consumers can quickly adapt to any changes (Munteanu & Dragos, 2021). By adding several support options like WhatsApp messaging or enabling 24/7 consumer service, FinTech increases its ability to interact

with consumers. Apple and Goldman Sachs offer a joint credit card in the USA that has comparable rates to other financial service providers, but is integrated into the Apple infrastructure, and so is more convenient and cheaper for many consumers (Apple.com, 2021). A better consumer experience thus has to be considered from the start to attract users and keep them interested.

As a corollary, FinTech, with lower operating costs and more focused business models, can take on more disadvantaged consumers (i.e., with lower credit scores) as they can have less conservative risk appetites (IMF, 2022), which means more people have access to financial services (which is a good thing).

So for EdTech the lesson is to build in good consumer service from the start. EdTech consumers include government agencies, schools, teachers and the end consumer (the child or adult being educated). Teachers are key, as they are both the source of the information as well as key users. Whereas FinTech has a high adoption rate, with 86% of UK consumers now using some sort of FinTech (Plaid.com, 2021), the uptake of EdTech is limited as many teachers lack the training and awareness of what it can offer (55% of teachers are unsatisfied with EdTech training; Brogan, 2021).

To improve the consumer experience for all stakeholders, especially teachers and students, EdTech firms have to make sure that their solution is aligned with consumers' expectations and test their application early and often. They should also ask for feedback from users on the ease of use and offerings of the service or product so they can make any significant changes sooner rather than later. Using AI, neural networks, etc., both FinTech and EdTech firms can also potentially satisfy their consumers' current needs and predict their future needs as well as improving their experience to build trust and develop loyalty.

Good consumer service can also mean having the right balance between digital and human interaction. Like a good game, design should funnel the user to where they need to go, raise awareness of key features and give users rewards to motivate them to use the service. The inclusion of voice assistants and chatbots can also add to the consumer's experience, through, for example, sending users notifications about bill payments that are due, warning them of a low balance, and also offering extensive proactive financial guidance. Building in human interaction, gamification and chatbots, FinTech has learned to develop trust through better consumer experiences (Hill & Brunvand, 2020).

If consumers and regulators cannot trust that the firm delivering the product or service will continue to function, how can we expect them to trust the firm at all? Recent research into FinTech business models has shown that organisations need to assess their FinTech initiatives to realise gains and business value, focusing on success factors and the unique value-added from being FinTechs (Jinasena et al., 2020). Revolut is the UK's biggest FinTech. It was founded in 2015, and as of June 2021, had a US$33 billion valuation, 15 million consumers, 2200 employees and revenue of £222 million in 2020, up from £166 million previously, although it had losses of £207.9 million in 2020, higher than the £107.7 million it lost in 2019. In June 2021 it had its next round of funding, receiving US$800 million. Monzo, another UK FinTech founded in 2015, is currently valued at US$4.5 billion, with 5 million consumers and 2100 staff. As of February 2021, its losses increased to £130 million, up from £114 million previously. Monzo also secured another round of funding.

The situation is similar internationally. On the other hand, some neobanks are profitable, such as Starling Bank, as well as many B2Bs, such as PayPal and Stripe. FinTech success is rarely measured in profitability, however, as it is seen as a growth market. FinTechs generate funding through measures such as bootstrapping, venture capitalists, angel investors, hedge funds, crowdfunding, or through more traditional sources such as bank loans. Yet for firms that purport to replace incumbent financial services that have been around for hundreds of years, many are not (yet) a success in terms of making enough profit to remain a going concern.

There are several reasons for FinTech failures, including having a bad business model, underfunding, compliance issues, technical limitations, poor management, wrong partnerships, economic downturn and competition (Boyd, 2021) (although these are also the reasons any firm will fail). The questions for FinTech and EdTech (and anyone else) are: how will they make

money and how will they ensure they continue to exist? EdTech firms must understand who the target audience is and what their needs are, and how they will deliver these needs - while making a return. If they need help in considering these questions, they may need suitable partners.

Financial services comprise many interwoven strands, covering payments, trade, fundraising, asset management, insurance, etc. There are also dependent strands such as risk management, compliance, audit and governance, to name a few. Given the level of complexity involved in financial services, FinTechs cannot progress without solid partnerships. Having the right support, whether in terms of technical advice, business or organisational support, will help ensure FinTechs can develop a sustainable business model. Having the right partnerships in place will also reduce the risk that businesses might become dependent on a single provider of critical infrastructure.

EdTech already has some strong partnerships in place, such as the School Rebuilding Programme (DfE, 2022) and the UK Government's Connect the Classroom (DfE, 2021). A key message from the Department for Education's digital strategy (Harrison, 2019) is that 'We need the future of technology in education to be driven by collaboration.' The focus should be on having partnerships to deliver and enhance the educational offerings (LEANLAB Education Editorial Team, 2021), not having education being used as a medium to sell the firm's products (Kingsley, 2020; Meyer et al., 2019). The educational agenda must be aligned to the interests of consumers, the government and firms (assuming, of course, that the government's wants are aligned with the consumers' and firms' interests).

Conclusion

So can EdTech learn from FinTech? Technology can make education more interactive and enhance the learning experience through the use of digital products. But, as we've seen here, there are many lessons EdTech can learn from FinTech, such as focusing on the consumer and their needs, not on the needs of the firm or the technology. EdTech can't succeed on its own; it must continue to develop relationships and support from stakeholders (teachers, technicians, regulators and consumers). It must work with stakeholders, especially governments and industry bodies, to deliver a strong governance and oversight model to reassure consumers. EdTech is not a separate industry from education; it is another service offering. And finally, remember that the key value that EdTech firms are selling is trust, not more convenience, better prices or more access. Once consumers trust that EdTech can provide their educational needs, the rest will follow.

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