

The Impact of FINTECH on Accounting Education

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Abstract

Blockchain technology, API (Application Programming Interface), Cloud Computing, Biometrics, DLT (Distributed Ledger Technology), Big Data, AI (Artificial Intelligence) & ML (Machine Learning), Smart contracts, and many more terms are linked with science and technology which are directly or indirectly are being used by the most of the banking and financial institution nowadays in various financial activities. 'FINTECH' is the abbreviation used to depict financial technology in this regard, this has not only widened the scope of the accounting and financial service sector but also create a requirement for its inculcation in 'Accounting education' as well. In particular, we are going to observe the impacts, opportunities, and challenges presented by FINTECH in the field of professional accounting and accounting education in India. We will also come along how management in accounting education institutions, regulators, and practitioners' views how the development of FINTECH is very positive which is not just a challenge but also an opportunity for accountants and prospective accountants to be ready and capable to face the new era of digital technology. Some instances have been discussed that how accounting education has adopted this new technologically-driven financial system in educating accounting professionals, teachers, and students. Whereas there is a lot of scopes still prevailing to get acknowledged and broaden FINTECH knowledge through curriculum development, updates, and improvement in teaching material related to technology and sectors associated with FINTECH. Accounting education among the citizens can be a torchbearer for the development of the FINTECH ecosystem and its adoption in India.

Keywords: Accounting Education, Financial Technology, FINTECH.

Introduction

FINTECH the abbreviation of financial technology is a word of high potential having two independent locutions Finance and technology, the financial services when using the technologies such as Artificial intelligence (AI), Machine learning, Smart contracts, Blockchain, Big data analysis, APIs, Data aggregators, etc. makes the construct of FINTECH. A single definition cannot be provided for FINTECH due to the complete diversification of business but as per the availed knowledge FINTECH can be concluded as any computer-driven program and technology-based industry enabling and supporting banking and financial services.

Technologically driven financial innovation has a long history to admire. 1950 is the year when credit cards appeared for the first time, followed by 1960 when Automated Teller Machine (ATMs) appeared, the 1970s and 1980s are the years of evolution of electronic stock trading and new data recording systems of banks', 1990s is the emergence of e-commerce and online banking. Then the period of great online revolution happens in the last decades of the 20s where digitalization of business and commerce through internet banking and e-business Garb pace through online platforms to connect the world via the internet. The next decades witnessed the growth of smart technology. The human palm was equipped with t a revolutionary gadget 'Smartphone', which makes a path for the app-based operating system which was the cherry on the cake for FINTECH-based start-ups. The next insurgent to the digital finance world is 'Bitcoin' in 2009. And in the present decade to the generation of 'rise of the robots' with the emergence of big data and artificial intelligence.

The modern FINTECH sector speeds up when after the Global financial crisis, the FINTECH market players realised that the banking and financial sector should be transparent and facilitative with full concentration on consumerism.

Precisely FINTECH is an initiative for innovative and disruptive businesses that uplift and accelerate financial services. In the recent era the FINTECH most of the economies have come across the rapid development in mobile devices, social media, and the internet. This development has provided the digital disturbance which has a wide-ranging impact and has also modified many companies and industries. In the industry of finance specifically innovative and, new players of the market are increasingly exploring opportunities from the financial sector's passivity in responding to the development of digitals. The provides a variety of innovative and sophisticated software solutions that challenge the continuity of conventional banking and other financial institutions. Different FINTECH start-ups have jumped up and given broad monetary administration frameworks and cycles, from credit and installment suppliers to resource the board and unfamiliar trade. Advanced interruption introduced by new imaginative market members in the monetary area is frequently known as FINTECH (Financial Technology).

Key Technologies used in FINTECH

Technology	Description
API (Application Programming Interface)	APIs consists a set of rules and specifications that software programmes employ to communicate with each other. They allow new and modified applications to be built on top of others.
Cloud Computing	The utilisation of an online network ‘cloud’ of hosting processors to expand the scale and flexibility of computing capacity, generating cost efficiency.
Biometrics	A study of distinctive and measurable human characteristics that are used to make categorisation and identification of individuals.
DLT (Distributed Ledger Technology)	The digital system for recording the transaction of assets in which details are recorded in multiple places at the same fraction of time.
Big Data	Voluminous amounts of unstructured or structured data that can be generated, utilised and analysed by digital tools and information systems.
AI (Artificial Intelligence) & ML (Machine Learning)	Information technologies systems that can perform functions that would otherwise needs human capabilities. Machine learning entails computers learning from data without human intervention.

Table 1-RBI Bulletin-FinTech: The Force of Creative Disruption

Accounting education has put a wide fundamental foundation in teaching and learning during this COVID-19 Pandemic by advancement in information technologies. Considering the importance of technology in the modern system of education, various software and computer applications companies are developing applications that are user-friendly and can be used in any situation. The accounting education is no doubt stepping along with these changes but being the supporting structure for financial analysis and reporting and considering the uncertain pandemic scenario it requires an urgent taught for faster adoption of such IT equipped educational environment. The relevance of information technology tools at all the standard levels of the economy needs to be embedded in the accounting taught and context with help of modern pedagogy. Accounting education has no doubt evolved with the technological changes but many more scopes and challenges are prevailing for better implantation and moving ahead of the phycological dependency upon traditional teaching and learning. Not only this but for coping with the universal adoption of FINTECH there is a huge requirement to become a front foot player in this technology-driven economy by focusing on the progressive changes in the curriculum and implementing the new form of financial services in teaching and learning for producing skilled graduates that are in demand.

The role of FINTECH in Accounting Education has emerged with the change in the industry of the financial service sector. The traditional accounting curriculum is only restricted to the development of accounting and finance knowledge among the students which only focuses upon theoretical knowledge. With the advent of changing business environment, new area of accounting has been developed such as cloud computing, automated accounting tasks, blockchain technology, etc. these all-form part of the FINTECH ecosystem.

Phrase **Accounting education** is all about accounting and education but both are a universal phenomenon. To make It one global accounting education model it needs to ensure that it will facilitate the requirement of business and society in all the regions of the world. Accounting academicians and executives

have marked on a process of analysing and investigating accounting curricula. Accounting education consists of teaching and learning accounting for imparting skills and competencies in the areas of communication, information development and distribution, decision making, knowledge of accounting, auditing, tax, knowledge of business environment leadership, and professionalism. The introduction of E-Commerce and computerized accounting has evolved as a significant factor in various organizations through transparency, cost control reduction economy of time, etc. The conservative way of teaching and learning has to be transformed for coping with the dynamic business environment and for faster growth of the economy. The curriculum of accounting should be upgraded to face the challenge of information technology.

In our country education of accounting is imparted to the students in three different phases which starts from senior secondary education, under-graduation, and post-graduation at the different university, colleges, and professional institutions. In the period of liberalisation and globalisation, the industry and business have to face many problems like up-gradation of technology, quality improvement, reduction in cost, consumer satisfaction, and outsourcing of techniques. The accounting education in India has not been upgraded to the standard level it is only restricted to some professional institutions like ICAI, ICSI, and ICWA. Hence the requirement of the present scenario of the business and industry has not been met by the prevailing accounting education to build globalised professional skills among the students and the scholars. With the rapid growth of E-commerce, Computerised accounting, and the application of information technology in the business environment, the Accounting education curriculum should be updated to pace up with these challenging changes in the accounting and business world.

Cloud Computing allows instant access to resources, such as computing and data capabilities. It helps in continual updates of information, which enables the accountants and the clients to make decisions and analyse data based on cutting-edge information. Cloud computing is witnessing rapid growth as the new technology of intelligence such as the Internet of things (IoT), artificial intelligence (AI), and Machine learning is integrated into the cloud. This innovation is an attraction for the accounting profession.

Automated Accounting Tasks- The labour and time bases of accounting- as audit, banking, tax preparation, and payroll are quickly becoming automated to its full. There are many vendors of software that offers automated data entry and reconciliation option using AI and machine learning technology in bookkeeping. Robotic process automation is also an example of AAT. This kind of accounting invention is an attraction of concern.

Blockchain Technology – A computer-based recording system that uses Cryptocurrency among the user-to-user network. It generates a new type of accounting ledger that continuously verify and update without the fear of any alteration or corruption. It is another trend causing the demand for accountants in the futures technology of blockchain. The smart contracts and real-time access to the ledger are catching the notice of accounting groups.

Research Objective:

The objective of this research is to investigate the impacts, opportunities, and challenges presented by FINTECH in the field of professional accounting and accounting education in India. It aims to examine the perspectives of management in accounting education institutions, regulators, and practitioners regarding the positive development of FINTECH and its implications for accountants and prospective accountants. Additionally, the study seeks to identify the current adoption of FINTECH in accounting education and

explore the potential for further integration through curriculum development and teaching material improvements.

Research Hypotheses:

1. H0: There is no significant impact of FINTECH on the field of professional accounting and accounting education in India.
H1: FINTECH has a significant impact on the field of professional accounting and accounting education in India.
2. H0: Management in accounting education institutions, regulators, and practitioners do not view the development of FINTECH as a positive opportunity for accountants and prospective accountants.
H1: Management in accounting education institutions, regulators, and practitioners view the development of FINTECH as a positive opportunity for accountants and prospective accountants.
3. H0: The current adoption of FINTECH in accounting education in India is limited and insufficient.
H1: There is significant adoption of FINTECH in accounting education in India, with room for further improvement.

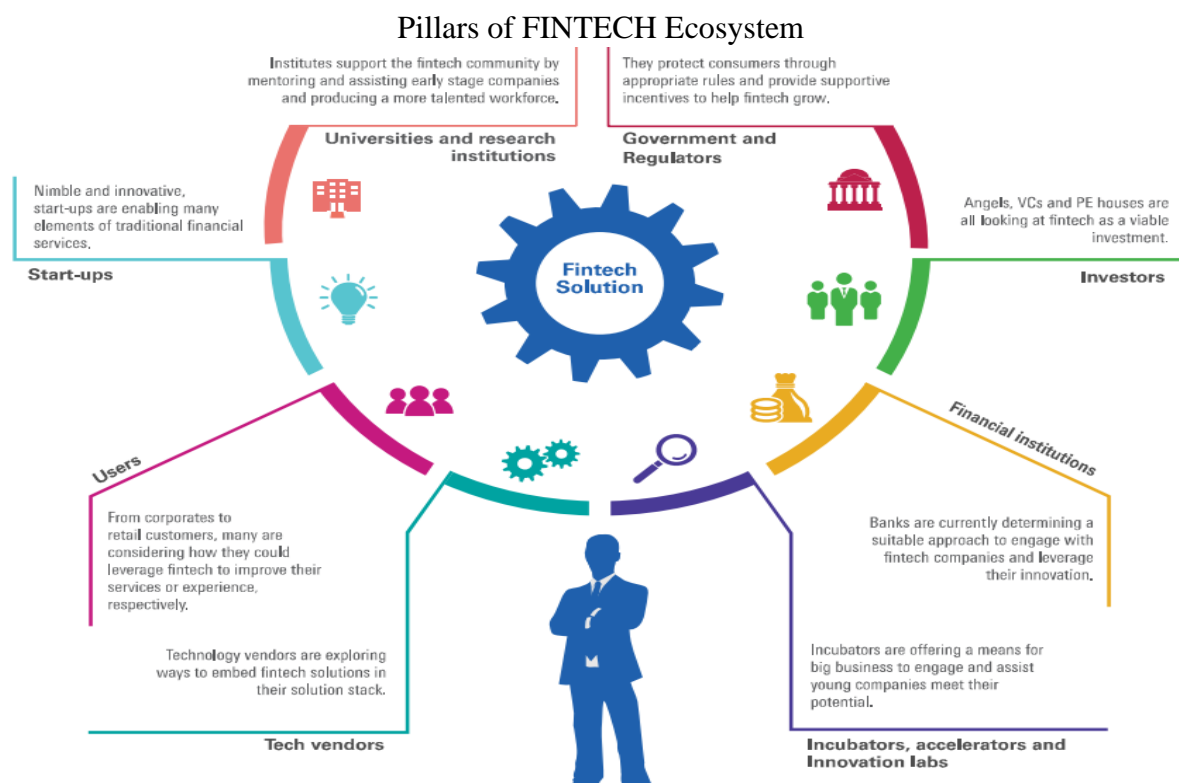


Figure 1-KPMG, Fintech in India - A global growth story

The above pillars of FINTECH depict the requirement for involvement of financial technology in accounting education structure because at every pillar there is a need for knowledge, its application, and analysis for making a rational decision.

The **User** must have an idea of FINTECH services and their convenience for easy adoption and its different form of traditional behavior fixated on cash, branch banking, and relationship-driven way of financial activities. The activities like mobile and internet banking, digital payment systems and e-commerce must be incorporated among users. There are some traces of drawbacks that are also in FINTECH history that must be assimilated into the knowledge of users.

The evolution of **startups** is vital for the flourishing FINTECH ecosystem. The increasing demand for digital financial products by customers, the widespread rise of connected devices, and the support of venture capitalists is the effect of imperative FINTECH. The start-ups focusing on high-end technological expertise in financial services have set a new trend in the financial ecosystem for FINTECH. Which in turn requires the involvement of FINTECH in accounting education.

The **Universities and research institutions** should also focus on the innovative ecosystem to build young technical talents for entrepreneurial mindshare with sound financial knowledge. Several academic Institutions have made initiatives for setting up events, courses, and competitions.

- IIT Delhi organised an Open house in 2016 to promote product development and innovative research projects.
- BITS Pilani launched the SPARK initiative to enable angel funding in various sectors including FINTECH like Payed.
- IIT Roorkee has launched Entrepreneur Conclave at the Global level to build entrepreneurial skills along with academic competence in technology in students.
- TISS NUSSD has developed a diploma and certification course for the development of digital and financial skills among university students.

This shows that there is a lot of scope in FINTECH in accounting and Entrepreneurial education.

The **Government** along with RBI is the prima facie catalyst for the failure and success of FINTECH business in India, the government is continually focusing on making India a cashless digital economy via many approaches to make India a strong FINTECH ecosystem by supporting FINTECH start-ups through 'The Start-up India initiative', various financial inclusion plans like 'Jan Dhan Yojana and extension of Aadhar for pension, provident fund, and Jan Dhan Yojana and by various taxes and surcharge relief. These all clearly show that Government is moving towards making India a financially abled ecosystem but the governmental educational bodies like UGC and educational departments should also target the teaching and learning of these digitally-driven financial services in curriculums.

Investors are coming to a new pattern than just FINTECH payment technologies like investing, lending, credit reporting, crowdfunding, wealth management, and many others are among them. The new era of digital investments has made a huge impact on investors of all kinds either small or large in VC investments in FINTECH businesses and even investments through FINTECH platforms in different types of activities. Although mostly all the investors are well versed in the new pater of investment some nascent investors should be educated about such new patterns of investment with their pros and cons.

Financial institutions are witnessing a rapid impact with the advent of the FINTECH sector which is actually a threat to traditional banking services but now these institutions are viewing FINTECH not as a disrupter but as an enabler. Most of the large banks are collaborating and making alliances on a variety of platforms such as investment intermediation, wallets, online client acquisition, insurance, etc. not only in

platform development but also by investing in them. Such change should be considered by the users for better understanding and ease in a financial transaction.

The **Incubators, accelerators, and innovation** labs are required because most of the FINTECH sectors are driven by young and first-generation entrepreneurs who are competing with the largest financial institutions and to provide them with not just funding but also peer connection, mentorship, financial industry exposure, and soft skill. Such entrepreneurs must have a knowledge of such Incubators, accelerators, and innovation labs.

The **Technology vendors** are also an important sector of the FINTECH ecosystem the knowledge of the correct technology to be adopted and the vendor who is providing the same is very much important for success in FINTECH start-up as well as for skills for students to figure out the appropriate and useful technology.

Conclusion

The article discusses the impacts, opportunities, and challenges presented by FINTECH (financial technology) in the field of professional accounting and accounting education in India. It highlights FINTECH's various technologies and concepts, such as blockchain technology, API, cloud computing, biometrics, DLT, big data, AI, ML, and smart contracts. These technologies have been adopted by banking and financial institutions, expanding the scope of the accounting and financial service sectors. The article emphasizes the need for incorporating FINTECH knowledge into accounting education. It suggests that accounting education should go beyond traditional theoretical knowledge and encompass areas like cloud computing, automated accounting tasks, and blockchain technology. The accounting education curriculum should be updated to keep up with the dynamic business environment and technological advancements. Furthermore, the article discusses the pillars of the FINTECH ecosystem, including users, startups, universities and research institutions, government, investors, financial institutions, incubators and accelerators, and technology vendors. It emphasizes the importance of collaboration and knowledge sharing among these pillars to foster the development of FINTECH in accounting education.

Accounting education is the core area of education in business and industry so, accounting institutions should provide better and specialized education in accounting in all levels of schooling and post-schooling. Although the professional institution and some of the educational bodies are making an impact on accounting education there is a requirement of a uniform course curriculum that will accelerate the knowledge of students and the professionals to face the changing scenario. Accounting and technology specialists from different institutions and universities should collaborate and consult to uplift the accounting education in the field of FINTECH before the commencement of the curriculum of the course so that a uniform curriculum for FINTECH education in accounting can be developed in India. The reconstruction and structurization of accounting education should be a priority for competing with the globalised scenario of FINTECH industry developments.

Some suggestions for the development of accounting education in FINTECH sectors are-

- The specialised course should be introduced in accounting education to face the emerging challenges of FINTECH business and industry.
- There should be an institution and industry interface to upgrade accounting education in India to help the students of accounting education to be highly professional which further creates jobs and increase employability in the FINTECH sector.

- There should be lecturer forums at university levels and collaboration between universities to discuss improvements in the curriculum that can accommodate the development of FINTECH in the Indian ecosystem.
 - Seminars, workshops, and pieces of training for students and working professionals of accounting need to intensify to discuss the development of FINTECH and the technical skills required for it in India.
- The FINTECH ecosystem is developing rapidly in the Indian economy and to cope with this new era accounting education should also get intensified to cater to the needs of this technologically driven financial system.

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