ISSN: P-2455-0515
E- 2394-8450

Educreator Research Journal

VOLUME–IX, ISSUE –VI

NOV – DEC 2022

Original Research Article

CAREER DEVELOPMENT IN EMERGING TRENDS IN CRYPTOCURRENCY AND BLOCKCHAIN TECHNOLOGY & ITS CHALLENGES

*Prof. Surendar Paulpandi Nadar,

* M.Com, UGC – NET, Matrushri Kashiben Motilal Patel Senior College of Commerce & Science

Abstract:

The emergence of cryptocurrencies and blockchain technologies is part of a broader wave of technologies that facilitate peer-to-peer (P2P) commerce, individualization of products, and flexibilization of production methods. Blockchain technologies aim to go one step farther. They organize P2P transactions and P2P information flows without companies that operate digital platforms. Cryptocurrencies are the first and therefore most developed application of blockchain technologies. Cryptocurrencies and blockchain technologies pose a range of policy challenges. They include the need to apply rules of financial oversight, consumer protection, and tax administration while at the same time encouraging and facilitating innovation, deal with the massive volume of electricity used to mine cryptocurrencies and determine whether governments and central banks can use blockchain technologies to improve their services. Policymakers should find a balance between curbing the hype and unleashing potentially transformational new opportunities.

Key words: *Cryptocurrency, Blockchain Technology, Digital platforms*

Introduction:

Cryptocurrency

- Cryptocurrency is a digital payment system that doesn't rely on banks to verify transactions. It's a peer-to-peer system that can enable anyone anywhere to send and receive payments. Instead of being physical money carried around and exchanged in the real world, cryptocurrency payments exist purely as digital entries to an online database describing specific transactions. When you transfer cryptocurrency funds, the transactions are recorded in a public ledger. Cryptocurrency is stored in digital wallets.
- Cryptocurrency received its name because it uses encryption to verify transactions. This means advanced coding is involved in storing and transmitting cryptocurrency data between wallets and to public ledgers. The aim of encryption is to provide security and safety.
- The first cryptocurrency was Bitcoin, which was founded in 2009 and remains the best known today. Much of the interest in cryptocurrencies is to trade for profit, with speculators at times driving prices skyward.

How does cryptocurrency work?

- Cryptocurrencies run on a distributed public ledger called blockchain, a record of all transactions updated and held by currency holders.
- Units of cryptocurrency are created through a process called mining, which involves using computer power

ISSN: P-2455-0515
E- 2394-8450

Educreator Research Journal

VOLUME–IX, ISSUE –VI

NOV – DEC 2022

Original Research Article

to solve complicated mathematical problems that generate coins. Users can also buy the currencies from brokers, then store and spend them using cryptographic wallets.

- If you own cryptocurrency, you don't own anything tangible. What you own is a key that allows you to move a record or a unit of measure from one person to another without a trusted third party.
- Although Bitcoin has been around since 2009, cryptocurrencies and applications of blockchain technology are still emerging in financial terms, and more uses are expected in the future. Transactions including bonds, stocks, and other financial assets could eventually be traded using the technology.

Cryptocurrency examples:

There are thousands of cryptocurrencies. Some of the best known include:

Bitcoin:

Founded in 2009, Bitcoin was the first cryptocurrency and is still the most commonly traded. The currency was developed by Satoshi Nakamoto – widely believed to be a pseudonym for an individual or group of people whose precise identity remains unknown.

Ethereum:

Developed in 2015, Ethereum is a blockchain platform with its own cryptocurrency, called Ether (ETH) or Ethereum. It is the most popular cryptocurrency after Bitcoin.

Litecoin:

This currency is most similar to bitcoin but has moved more quickly to develop new innovations, including faster payments and processes to allow more transactions.

Ripple:

Ripple is a distributed ledger system that was founded in 2012. Ripple can be used to track different kinds of transactions, not just cryptocurrency. The company behind it has worked with various banks and financial institutions.

Blockchain:

- Blockchain is a record-keeping technology designed to make it impossible to hack the system or forge the data stored on it, thereby making it secure and immutable.
- It is a type of distributed ledger technology (DLT), a digital system for recording transactions and related data in multiple places at the same time. Each computer in a blockchain network maintains a copy of the ledger to prevent a single point of failure, and all copies are updated and validated simultaneously.
    - Blockchain is also considered a type of database but differs substantially from conventional databases in how it stores and manages information. Instead of storing data in rows, columns, tables and files as traditional databases do, blockchain stores data in blocks that are digitally chained together. In addition, a blockchain is a decentralized database managed by computers belonging to a peer-to-peer network instead of a central computer like in traditional databases.
    - The cryptocurrency Bitcoin, launched in 2009, was the first popular application to successfully use blockchain. As a result, blockchain has been most often associated with Bitcoin and alternatives such as Dogecoin and Bitcoin Cash.

ISSN: P-2455-0515
E- 2394-8450

Educreator Research Journal

VOLUME–IX, ISSUE –VI

NOV – DEC 2022

Original Research Article

Types of blockchain:

- Blockchain platforms can be either permissionless or permissioned. Permissioned blockchains require approval to access, making them essentially private blockchains.
- Permissionless blockchain does not require permission to enter the blockchain network. In a public, permissionless blockchain like Bitcoin, every node in the network can conduct transactions and participate in the consensus process. In a private, permissioned chain like Multichain, every node might be able to perform transactions, but participation in the consensus process is restricted to a limited number of approved nodes.
- Numerous blockchain platforms are available, but three of the most prominent are Ethereum blockchain, Hyperledger Fabric and Open Chain.
  1. Ethereum blockchain is a widely used, open source and custom-built blockchain platform considered to be an industry-leading choice for enterprise applications.
  2. Hyperledger Fabric is another open source blockchain platform. Used by industries such as finance and manufacturing, it is designed for permissioned networks. Hyperledger Fabric can also be used for decentralized hosting and storage of applications that employ smart contracts.
  3. Open Chain is an open source blockchain platform for organizations that want to manage and preserve digital assets. An administrator of an Open Chain blockchain will define the rules used in the ledger. Users can then exchange value on the ledger by adhering to the rules.

Review of Literature:

1. Rahman and Dawood (2019) in their Bitcoin and Future of Cryptocurrency focused on cryptocurrency as an imaginative and technically advanced alternative for globalization. It examined the possibility of an alternative for processing payments across geographical boundaries and if regulated effectively cryptocurrency could remove a lot of the financial challenges faced in the present.
2. C.A. (Dr) Pramod Kumar Pandey (2017) in his Bitcoin as Emerging Virtual Currency and Its Related Impact on India focused on the high returns and the high risk that comes along. He believed bitcoins aren't mature and investing in bitcoins would be like jumping in a dark well without knowing the depth, since bitcoin is not backed by anything. One of the challenges to be faced would be to establish it as a currency or commodity. If this is established as a currency, probably RBI will play a leading role in its regulation, while if this is a commodity, SEBI will initiate regulations.

Aim of this Research:

The author of this research has written this paper intending to throw light on the legality of cryptocurrency in India and its positive and negative effects and During this research, I came across various takes on both sides of the coin. The reader of this research paper should expect to get detailed information on that entire cryptocurrency project in our country.

Research Methodology:

For the purpose of this study, the author has utilized secondary data. The data was collected by several articles, journals and websites including the of financial website of the RBI and Forbes. A Descriptive study was

ISSN: P-2455-0515
E- 2394-8450

Educreator Research Journal

VOLUME–IX, ISSUE –VI

NOV – DEC 2022

Original Research Article

employed for this study. To meet the aim of this research project, the author has made use of qualitative data to study and analyse the impact legalising cryptocurrency in India has on its people and economy. A comparison was made with other nations and the ramifications they have seen. This research study was conducted in Bangalore, Karnataka, India during the period of June 2020 to August 2020. The demographic limitation of this study is India. The authors have tried to cover the research gap by analysing the secondary information collected.

Challenges of Block Chain Technology:

- **Inefficient Technological Design**

  This is one of the major challenges of implementing blockchain. Although blockchain technology has a lot of perks, it still lacks in many technological ways. A coding flaw or loophole is one of the significant points in this.

  Bitcoin was the frontier in this regard, but still, the whole system reeks of inefficient design. Sure, Ethereum tried to cover up all the lacking of Bitcoin, but it's still not enough.

- **Low Scalability**

  Another one of the challenges of implementing blockchain is scalability. In reality, blockchains work fine for a small number of users. But what happens when a mass integration will take place? Ethereum and Bitcoin now have the highest number of users on the network, and needless to say, they are having a hard time dealing with the situation.

  When the user number increase on the network, the transitions take longer to process. As a result, the transactions cost higher than usual, and this also restricts more users on the network.

  It can take even days to process the whole transaction. So, in the end, this blockchain adoption challenge is making the technology less and less lucrative

- **High Energy Consumption**

  Energy consumption is another blockchain adoption challenge. Most of the blockchain technology follow bitcoins infrastructure and use Proof of Work as a consensus algorithm.

  Mining will require you to solve complex equations using your computer. So, your PC will take more and more electricity to overcome this situation when you start mining.

- **No Regulation**

  This is one of the main challenges of implementing blockchain in an organization. Many organizations are making blockchain technology a means of transaction. You will see many products depended on this. But even now, there aren't any specific regulations about it. So, no one follows any specific rules when it comes to the blockchain.

  Now, this is where the issue comes in. Although blockchain guarantees visibility as one of its benefits, there is still no security. You won't know for sure if it will be safe for you or not. To get over these challenges, governments and extremely controlled sectors may need to create regulations for blockchain.

- **Security Problems**

  Security is another crucial topic here. We all know how every blockchain technology boasts about its security. But like any other technology, blockchain also comes with a few security loops.

ISSN: P-2455-0515
E- 2394-8450

Educreator Research Journal

VOLUME–IX, ISSUE –VI

NOV – DEC 2022

Original Research Article

The 51% attack on the network is one of the security flaws of the network. In this attack, hackers can take over the network and exploit it in their way. They can even alter the transaction process and restrict other people from creating a block.

Overcome for the challenges:

1. To deal with the security challenge, the protocol layer needs more security. We already saw some of its security loopholes by now. However, only a handful of scenarios have good protocols that can cope with this. So, no one knows whether they are safe to use for a long time.
2. Like any technological innovation, the blockchain will continue to evolve. Yes, there may be challenges, but they are not obstacles. Adopting new regulations and standards is a must. Before you know it, you are also considering using blockchain technology for your company. So, beware of the blockchain adoption challenges.
3. Before the general adoption is possible, members of the public must understand the difference between bitcoins, other cryptocurrencies, and blockchain. This will help to eliminate the negative implications of cryptocurrencies and make the technology shine by itself. It will be the result in an increased willingness to use the technology.
4. Privacy is an essential requirement in the case of bitcoin and other cryptocurrencies. On the other hand, this raises some concerns for governments and companies. Governments and companies always need to protect and restrict access to their data for various reasons. This means that blockchain technology won't be able to work with sensitive information until anyone solves the problem. Private or federated blockchain can work here. You would get limited access, and all your sensitive information would stay private as it should.

Conclusion:

- We as a future Entrepreneur look into this new technology, Even though it may seem like there are only problems with blockchain, there are already a lot of counter platforms in place. For example, Hyperledger offers a multitude of projects focused solely on enterprise companies. Not only that, Ethereum is even working on permissioned platforms that can solve the majority of the problems with blockchain for enterprises.
- More so, permissioned blockchain can offer benefits for many industries. In reality, there is already a lot of application and projects live that is working perfectly. So, as you can see, all the problems with blockchain will come with solutions and opportunities.
- More so, many companies are eager to implement or use this tech, and they are investing a good amount of money in it. Thus, it's only a matter of time when we'll see a big change in society and the economy.

Reference:

Peter D DeVries, Professor of MIS, "An Analysis of Cryptocurrency, Bitcoin, and the Future" Journal of Business Management and Commerce Vol 1 no. 2; September 2016

Shailak Jani, "The Growth of Cryptocurrency in India: Its Challenges & Potential Impacts on Legislation"

Cite This Article:

* ***Prof. Surendar Paulpandi Nadar (2022)*** *Career Development in Emerging Trends in Cryptocurrency and Blockchain Technology & its Challenges,* ***Educreator Research Journal, Volume–IX, Issue– VI****, Nov –Dec 2022, 21-25.*