

BLOCKCHAIN USE FOR A DECENTRALIZED SYSTEM OF ASSESSMENT



The Hanging Gardens painting by Samuel Miller

Peer created microassessments

The foundation of any educational institution is its assessment system. This defines what it values, promotes, and propagates. In turn an educational system forms the foundation of a society, defining what its citizens value, promote, and create. Our current dependence, then, on standardized assessments is disturbing yet necessary.

We need ways to measure an individual's abilities and achievements. If one cannot prove they have learned they cannot operate on that learning with others and move forward. So students are forced to use the limited standardized assessments valued by society, assessments that encourage poor pedagogical practices and restriction of independent learning while putting incredible stress on teachers and institutions both in creation and maintenance of their integrity. So while these tests may currently be necessary it's clear their continued use is unsustainable.

As an alternative **otlw** proposes an abstracted system of assessment based on randomized peer consensus and built on Ethereum Blockchain. Instead of focusing on single hard-to-make easy-to-break assessments it leverages multiple, smaller, peer created microassessments of user defined tasks. <http://otlw.co/paper>

Other uses of Blockchain in Education

A project developed by **Sony Global Education** uses Blockchain for open and secure sharing of academic proficiency and progress records. At the moment, verifying education credentials requires extensive

legwork. Companies have to hire specialized agencies that carry out this work, or they have to take up the job of verifying educational credentials by themselves. This is slow, tedious and expensive. If my school issued a digital certificate, which could be verified through a private or a public blockchain, any potential employers and schools could just look at my results if they had access to the blockchain. [Holberton School](#) and MIT Media Lab are already issuing digital certificates to their graduates. <http://cointelegraph.com/news/sony-started-using-blockchain-for-hassle-free-education-certificates>

The Blockchain in Education Question

<http://www.aud.life/2016/the-blockchain-in-education-questions>

What is Blockchain?

Chances are that you've heard of bitcoin, the digital currency that many predict will revolutionize payments – or prove to be a massive fraud – depending on what you read. Bitcoin is an application that runs on the Blockchain, which is ultimately a more interesting and profound innovation.

The Blockchain is a secure transaction ledger database that is shared by all parties participating in an established, distributed network of computers. It records and stores every transaction that occurs in the network, essentially eliminating the need for a central authority to verify trust and the transfer of value. It transfers power and control from large entities to the many, enabling safe, fast, cheaper transactions despite the fact that we may not know the entities we are dealing with.

The mechanics of the Blockchain are novel and highly disruptive. As people transact in a Blockchain ecosystem, a public record of all transactions is automatically created. Computers verify each transaction with sophisticated algorithms to confirm the transfer of value and create a historical ledger of all activity. The computers that form the network that are processing the transactions are located throughout the world and importantly are not owned or controlled by any single entity. The process is real-time, and much more secure than relying on a central authority to verify a transaction. Click [here to see it in action](#).

<http://www.brookings.edu/blogs/techtank/posts/2015/01/13-blockchain-innovation-kaushal>