

# Uber-U is Already Here

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## Powered by Blockchain Technology

*"The future is already here it is just not evenly distributed"* William Gibson

Mike simply does not understand parametric statistics. He uses an app to connect to Uber-U and a tutor is online from Chicago, Illinois, in just three minutes from the moment Mike asks for help. The tutor is offering an hour at a time support. After three hours of this tutoring, Mike completes the online assessment, passes this component of his statistics course and earns 0.33 credits towards his statistics course at ABC University. ABC accepts this credit because the transactions involved – tutoring, online assessment, grading – are all recorded in the very detailed transaction record, which Uber-U uses, and which is compatible with their learning platform system. Six weeks later, Mike is struggling with a chemistry problem and makes a call to Uber-U. Five minutes later, a tutor from Nicosia, Cyprus, connects via FaceTime and spends an hour and a half with Mike. He completes the rich simulation assessment online, passes, and secures 0.25 credits towards his chemistry course, which is again automatically accepted by ABC. He uses Uber-U for a total of 42 credits towards his 120 credit degree.

Sounds implausible? Not at all. Uber-U is already here, if not yet in name, in practice. It relies on a small number of technologies:

- A **mobile app** that enables a user to connect to a central hub, which then connects student needs with available tutoring or other forms of help from around the world. It is not difficult to imagine lynda.com getting into this space – they already offer skill-based courses in business, technology and creative arts. The Higher Education division of lynda.com is already developing a system similar to that described above, in partnership with Yale, Virginia Tech and others.
- A **tracking system which enables fees to be charged and transferred** between the student and the tutor. The Uber app, which we use to call for a ride, has this technology built into it as do a large range of other apps. In many ways, this is already designed in to almost everything we do with a mobile or desktop device.
- **Online assessments** which can verify the competence and skills of the student and their identity. There are a growing number of assessment systems offering knowledge and competency assessments online. Amongst the best - used by Rolls-Royce, UK Army, Honda and others – is vametric.com. A criterion and compliance driven assessment platform, vametric.com offers rich accountabilities for knowledge and skills. This platform has emerged as a platform of choice for major employers worldwide. It is increasingly being used by educational organizations as a way of ensuring the student has mastered knowledge and skills to a standard which has widespread acceptance. It also enables the home institution's academic staff to be engaged in the assessment process.
- A **blockchain system** which records all aspects of every transaction so that the credential awarding institution (ABC University in our fictitious example) can verify that learning took place and that a verifiable assessment of knowledge, competencies and skills took place. Sony Corporation is investing in blockchain technologies for education – the technology behind the Bitcoin. In Sony's system, verified assessment results are captured, automatically transferred to the registration system of the home institution and, through the institution's own automated verification systems, can then be added to the student transcript. Anyone with

permission can view the entire and detailed transactions associated with this credit (who did what, when, where and how) at any time.

## **Major Differences to our Conception of the Process of Learning**

Such a system can make a major difference to our conception of the process of learning. For example, the combination of these elements can accelerate the completion of key credentials. A program of health care studies that used to take 15 months can now be completed in half this time, since learning and assessment can take place at any time. It can also end the dual assessment process for professional certification, for example, where a university offers a degree but the successful degree holder still has to complete an accreditation assessment from the appropriate regulatory body, as is the case right now with nursing, human resource management and other professions.

Uber-U depends on a number of key components. First, it assumes learning is both modular and stackable. Students are expected to master discrete units of knowledge and skill in each learning module – there may be six learning modules in a statistics course, for example, and each can be taken as a short 2-3-week course or challenged through competency assessment. This is something that is already happening in some US and Canadian colleges. These modules can be combined so as to constitute a “normal” 3-credit undergraduate course – this is the stackable component.

Uber-U also requires standardized assessment for the same set of skills. In our example, regression is assessed by a standard rubric which is acceptable at all participating institutions. This is a major change. Currently, each instructor teaching regression assesses regression in their own way. The Uber-U assessment, through a system like vametric.com, provides a global standard assessment which is acceptable to academic institutions and employers, both of whom are engaged in designing such assessments.

For health care professionals, for example, it would enable fast and affordable assessment of nursing competencies irrespective of where in the world the individual received their nursing education. This is why major healthcare employers are using this system to verify knowledge and skills of their employees right now.

## **Quality Measured in Terms of Competency and Learning Outcomes**

Uber-U also assumes that quality is measured in terms of competency and learning outcomes, not time in class or the number of courses taken at the home institution. It means an end to residency requirements or, as a compromise, a reduction from the assumed 50% of courses taken at the home institution, to a much smaller number. The home institution specifies the knowledge, skills, competencies and capabilities a successful student must have and then accepts verified assessments of students in terms of the learning outcomes they established. It is a very different conception of the nature of the college or university in learning, likely to be opposed by many.

This poses significant challenges to the dominant business model of many traditional colleges and universities. This model assumes the right to award or withhold credit rests with the faculty member who is teaching a specific course rather than with a process independent of that faculty member. This is not the case in all colleges and universities around the world, but is the dominant model. Uber-U assumes the faculty member's role is focused on the design of teaching and learning activities and modules and that they have a role in offering suggestions for the design of assessment, but that the assessment is done independently of the faculty member. Credit is something the institution awards, via agreed rubrics and competency assessments.

## **The Blockchain Component**

The blockchain component is key to all of these developments. All elements of the student's transactions to secure any kind of credit through Uber-U are captured and verified in the transaction records for the student. Registrars will,

quite rightly, demand this. They need to know what the person claiming credit did with whom, when and how this work was verified. Further, the results of an assessment of competencies, for example, may be modified within the home institution so as to fit their rubric. As Sony says of its blockchain solution, “each evaluating organization sent an individual’s testing records could assess those results and calculate a score in a way that fits its own methods”. A score of 50 may be accepted “as is” in one college or university but be adjusted up or down at another, so as to reflect its weighting of this module or skill set. Once competencies and capabilities are agreed by the college or university and assessment rubrics created, credit is awarded by the college or university on the basis of assessment reports. It then becomes part of that student’s blockchain portfolio and should be accepted by any employer or institution needing to verify the individual actually holds the credential – no more paper, photocopies or delays.

Colleges and universities are likely to be cautious in adopting this approach and many students will be as well – it is very different from the norm and may be seen by some as subverting the very purpose of the college or university. But these kinds of developments are already here and in use by major employers around the world. Smart colleges and universities (as well as high schools and private colleges) are moving in this direction, seeing it as building in new capacities for access and completion at a lower cost. They are also seeing these kind of developments as reaching new markets and creating new opportunities.

There are significant challenges with the approach – shifting from faculty-driven courses and assessments to modular, stackable, independently assessed competencies and capabilities which carry credit – but these developments do create new opportunities for a new kind of college or university. They may be more attractive to some programs and departments than others – those offering routes to a profession, those engaged in skills education and those focused on employability. But make no mistake: Uber-U is here and will grow.