view from the top   nicholas and herman

Digital networks will transform how academics build reputations

"The main currency for the scholar," wrote the education researcher Tony Becher in 1989, "is not power, as it is for the politician, or wealth, as it is for the businessman, but reputation." For a long time, that reputation has been determined by a single academic activity—research—and, moreover, just one facet of this activity, publishing in peer-reviewed journals.

The result is a skewed reward system. Recruitment and appointment decisions for scholars commonly depend on journal impact factors and H-index scores, a metric based on citation counts and publication productivity. The rapid internationalisation of the scholarly ecosystem reinforces this, as newly industrialised countries such as China and India emulate the western world.

Yet academics have many ways of disseminating knowledge and contributing to scholarship and society: teaching, public engagement, policy impact, industrial collaboration and so on. These may not carry the cachet of publication, but they are equally important.

The digital revolution could and should redress the balance. The disruptive technologies devised for collaboration and sharing, such as open-access publishing, open data, citizen science and massive online open courses (Moocs) are giving rise to new ways of scholarly working, dissemination and, crucially, measurement. New actors—freelancers, amateur experts and citizen scientists—are entering the field.

The scholarly world in the digital age needs to adapt to these changes and find more balanced ways of establishing and measuring reputation. With this in mind, another disruptive technology is set to change things: social scholarly networks. The transformation will be big, because it touches on a particularly sensitive scholarly nerve and may well result in scholarly reputation and impact no longer being associated wholly with publications.

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The European Commission in particular is pushing for such a change, seeing it as a way to deliver enormous economic and social benefits, such as an improvement in the status, and so quality, of university teaching which in turn would lead to a better-educated workforce. The Commission would like to see scholarship defined and interpreted more broadly, and all types of researchers recognised and rewarded for the full scope of their activities. As a consequence, in 2014-15 our company, CIBER Research, was engaged to conduct an audit of emerging reputation mechanisms and platforms.

We identified 55 activities—not all of equal weight—as capable of contributing to a scholar's reputation, and subdivided them using the American educationalist Ernest Boyer's model of scholarship. It was no surprise that nearly half related to research, including producing research outputs individually or collaboratively, obtaining funding, dissemination, sharing data and peer reviewing.

Another category, the scholarship of integration, included writing literature reviews and textbooks, and working on inter or multi-disciplinary projects. A third, the scholarship of application, included consultancy and the popularisation of science. For the scholarship of teaching there was producing and delivering a course, using traditional or participatory and open teaching strategies, including Moocs. Finally, activities associated with the scholarship of co-creation included citizen-science projects.

More than 25 digital platforms can claim to provide help in building, showcasing and measuring the scholarly reputation associated with these activities. We estimate these platforms to have a combined membership of more than 55 million. Like the number of users, the number of players and the number of ways to measure reputation are growing fast.

THE BEST-KNOWN specialist platforms are probably ResearchGate, Academia.edu, Mendeley—largely a reference manager that, possibly under pressure from ResearchGate, has recently upped its reputational game—Impactstory and Kudos. None is comprehensive—even in aggregate they only support half of the activities that we felt had the potential to shape reputation. Not surprisingly, these were heavily skewed towards research. Just three teaching activities were covered.

ResearchGate is one of the fastest growing of the emerging platforms, and is the talk of the scholarly communications world. It had 8 million members by the end of 2015 and looks likely to achieve 10 million by the end of 2016. With 10 metrics related to reputation, the site has the most comprehensive set on offer. Some are based on engagement, such as counts of followers and endorsements and participation in Q&As. A major attraction is that it feels like one of the big social media platforms.

ResearchGate is controversial, too. It threatens to fundamentally change scholarly communication by, possibly, replacing publishers as the prime deliverers of reputation and, most controversially of all, stripping them of their function as the curators and storehouses of publications. A legal confrontation between

ResearchGate and publishers might be in the offing over whether researchers' posting their papers on the site breaches copyright. If this happens, and the publishers win, it could be curtains for ResearchGate's reputation metrics, but it could also be dangerous for the publishers, given the site's size and popularity with academics.

Possibly because of this threat, ResearchGate is a secretive company, although it would probably argue that it is only guarding the diamond in the mine, the algorithm for a composite measure of reputation known as the RG score, which is claimed to be "a new way to measure scientific reputation".

None of the emerging reputation mechanisms are perfect and are all striving to build their own scholarly reputations. Some metrics are really more reflections of popularity and activity than quality and so are more easily gamed. To counter this, ResearchGate still relies on various forms of citation counts for some of its metrics, including the RG score. Even so, one member has built an RG score that places them among the top 5 per cent of the site's users, better than many Nobel prize winners, just by answering users' questions.

Traditional, citation-based measures of reputation are more transparent and are better-suited to self-policing. They can also be gamed, of course, although people tend to be more aware of their limitations or simply overlook them. The best option could be a dashboard of metrics, rather than a single score, that gives a robust picture of academic reputation. Kudos is striving to do this.

What is astonishing is why measuring teaching reputation is still so difficult. Internal appraisals open a window onto individual modules or courses, but these are typically de-personalised and kept private, supposedly to spare teachers' feelings. But why should this be, when there are many platforms that broadcast how good, or bad, a researcher you are? No reason, really. With increasing pressure from consumers and the media, and with the rising cost of higher education, the question of why you can find out so much about research reputations, but nothing about decades of teaching is becoming harder to ignore.

General surveys of institutional teaching quality, such as the National Student Survey in the UK, are gaining a higher profile, and teaching is being given increased weighting in university rankings. Some argue against measuring individual teaching reputation because of alleged student ignorance and possible biases and abuses—such as students using surveys to punish exacting lecturers. Despite these concerns, American sites such

David Nicholas is director of CIBER Research and a professor at Tomsk State University, in Siberia, and the University of Tennessee. Eti Herman is a principal consultant at CIBER Research. Their report for the European Commission is available at http://rsrch.co/1THZeCZ

as CourseTalk and Rate My Professors continue to grow, and these will inevitably cross the Atlantic.

These platforms are not going away—although, judging by the waves of consolidation that have hit other areas of digital businesses, they might be bought out. What will the future look like? Speaking both as researchers and as members of reputational platforms, we think it looks something like ResearchGate.

The power of ResearchGate, or any social media platform, is that it locks you into real-time engagement, patting you on the back, constantly refreshing your ratings and enjoining to you to improve your scores. Most importantly, it seems to serve your best interests. It has the best characteristics of social networks and, in the barrage of emails, some of the worst. In comparison, publishers' platforms look one-dimensional and lifeless.

THERE ARE OTHER REASONS for believing that emerging reputation platforms have a bright future. In every subject and country that we studied, scholars are using them. While they are not yet seen as central to academic reputation, scholars do see their potential and are cautiously dipping their toes in the waters. Even the naysayers felt that reputational platforms were the future.

Significantly, it is young researchers who take the broadest view of reputation and thus favour the emerging platforms. These sites are particularly attractive to them in that they can fast-track their careers. It takes years for your citation scores to build, but usage data and follower numbers can build in months.

Change will not happen overnight. Academia is a conservative, global system and impact factors have never been as important as they are now. However, the pressure is building. For one thing, there is digital inevitability: ResearchGate has grown from 800,000 users since 2008 to 8 million. For another, policy directives from the Commission and funders will move things along, maybe doing what they did for open-access publishing. In the end, these pressures will surely cause the existing system to collapse under its own unevenness and unfairness.

Such change will pave the way to the adoption and recognition of a wider range of activities in the assessment of reputation, and so a greater awareness and recognition of achievements. Giving non-research activities a higher profile will cause scholars to invest more in them, and so get better at them. Reputational platforms will be part and parcel of this, having a lasting impact and playing an increasingly central part in enabling scholars, in the widest sense of the term, to see statistical evidence regarding the impact, usage, or influence of their work. *Something to add? Email comment@ResearchResearch.com*

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