Crowdsourcing math research

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Related Categories: Abundance, Creating

Crowdsourcing has been used to write encyclopedias (Wikipedia), rate movie you might like (Netflix), review books (Amazon). Now it has been sucessfully used for math research! The meta-brain of a crowd can be more than the sum of the individuals.

Instead of one mathematician working for weeks to create a perfect larger result in this co-creation model multiple people add and improve small idea until the problem is solved. It remindes me of the manufacturing process improvement of Kaizen - continuous small improvements over time are better than major overhauls.

It also shares responsiblity for improvement in the whole crowd and makes transparent the creation process, messy as it may be, which may spark new ideas in others problem solving projects.

It seems to me that this kind of co-creation is more rooted in love and abundance than the ivory tower publish or perish model which is often based around fear and scarity. Having fun and being playful are other important aspects of co-creation. I would suggest that looking at the principles used in Improv would be helpful to improve the process

The text belo is from Wikipedia:

Polymath Project

In a 2009 post on his blog, Gowers asked the provocative question "is massively collaborative mathematics possible?" [5]. This post led to his creation of the Polymath Project , using the comment functionality of his blog to produce mathematics collaboratively . [6]

The initial proposed problem for this project, now called Polymath1 by the Polymath community, was to find a new combinatorial proof to the density version of the Hales–Jewett theorem . As the project took form, two main threads of discourse emerged. The first thread, which was carried out in the comments of Gowers's blog, would continue with the original goal of finding a combinatorial proof. The second thread, which was carried out in the comments of Terry Tao's blog, focused on calculating bounds on density Hales-Jewett numbers and Moser numbers for low dimensions.

After 7 weeks, Gowers announced on his blog that the problem was "probably solved", [7]though work would continue on both Gowers's thread and Tao's thread well into May 2009, some three months after the initial announcement. In total over 40 people contributed to the Polymath1 project. Both threads of the Polymath1 project have been successful, producing at least two new papers to be published under the pseudonym D.H.J Polymath [8][9][10].

The success of the Polymath1 project has spawned additional Polymath projects. To date there are 5 official Polymath Projects, and 2 Mini-Polymath Projects. More information on the Polymath1 project can be found on the project wiki . Jason Dyer's *A gentle introduction to the Polymath project* provides a good explanation of the work of the project for a non-mathematical audience.

Tricki

Tricki.org is a Wikipedia -style project collecting methods of mathematical problem solving conceived in 2008 and launched by Gowers, Olof Sisask and Alex Frolkin in March 2009. [11]Terence Tao and Ben Green are among those to have contributed articles. [12]