# Title

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## ABSTRACT
Abstract

## Categories and Subject Descriptors
H.4 [**Information Systems Applications**]: Miscellaneous; D.2.8 [**Software Engineering**]: Metrics—*complexity measures, performance measures*

## General Terms
to be completed

## Keywords
to be completed, if necessary

## 1. INTRODUCTION

## 2. METHOD
1. The current investigation involved collecting historical data of edition and quality metrics, from 10 categories of articles in Wikipedia, with focus on fine-grained edits by contributors to articles.

2. The chosen categories contain between 100 and 1000 articles, and between 100 and 500 contributors have edited at least 100'000 times all the articles over their history. (c.f. table 1 for summary statistics on the categories).

3. For each category, we constructed 10 snapshots of equal number of contributions / we constructed snapshots of 10'000 edits. For each snapshot, we constructed the matrix **M** of contributors versus edited articles. For each snapshot, the values in **M** are defined as the number of edits made by contributors to each article in the category until the snapshot timestamp. The matrix **M** constitutes the basic input for implementing the **FQ** algorithm. It has a typical triangular structure as shown on Figure 1. We also collected standard metrics of contributor expertise [] and of article quality [**?**], to test the quality of the **FQ** algorithm in the context of group collaboration.

**Table 1: Summary statistics for each category**

| Non-English or Math | Frequency | Comments |
|---|---|---|
| Ø | 1 in 1,000 | For Swedish names |
| $\pi$ | 1 in 5 | Common in math |
| $ | 4 in 5 | Used in business |
| $\Psi_1^2$ | 1 in 40,000 | Unexplained usage |

**Figure 1: Matrix M ordered by decreasing order of edits on both contributors and articles dimensions.**

4. We then applied the most general implementation of the **FQ** algorithm as developed for modeling the economy and competitiveness of countries [].

5. While the implementation presented here is strictly similar to **??**, the interpretation is slightly different in the context of group collaboration. Indeed, while countries competes for selling products, the hypothesis here is that Wikipedia contributors cooperate, at least in a very informal way, for improving the quality of articles.

6. *Refer to problems here, if any.*

## 3. CONCLUSIONS