

Effect of Library Advocacy on Mendeley User Adoption and Productivity

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Effect of Library Advocacy on Mendeley User Adoption and Productivity

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Abstract

Millions of researchers and students currently use Mendeley.com, a free reference manager and one of the largest academic collaboration networks, to support them in reading, writing, collaboration, and publishing processes. Mendeley is an easy-to-use reference management tool with only self-help online tools available for researchers. However, in the last two years, with its integration with Elsevier, it has made available more varied support resources for new users. It is widely believed to be more effective to provide structured support for early career researchers versus just-in-time support for seasoned researchers; and structured support for STEM disciplines versus just-in-time for non-STEM disciplines.

This study first defines the baseline differences in user adoption and productivity rates between different disciplines (STEM versus non-STEM users) and academic statuses (undergraduates, graduates, post-docs, professors). Then, by applying different library resources (in-person training sessions, help aid, tutorial video, and on demand support) in selected US institutions, this project attempts to understand the effects of different support resources to eventual user adoption and productivity.

Objective

The objective of the study is to understand the user adoption and productivity rate of a reference management tool such as Mendeley between different discipline and academic statuses and how they are affected by different structured and just-in-time learning and support resources.

Academic Institution Participants

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- Stanford University: Helen Josephine, helenj@stanford.edu
- Touro College: Carrie Levinson, carrie.levinson2@touro.edu
- Carnegie Mellon University: Lynn Berardm lberard@andrew.cmu.edu

Requirements to Participate for Academic Institutions

- Assign a librarian project lead
- Give permission to analyze new users' behavioral data between January 1, 2015 and May 8, 2015
- Give permission to send a user survey to all "new registered users" between the weeks of May 11 and May 20
- Librarian project lead to track and diary all known activities to promote Mendeley on campus
- Total commitment hours: eight hours per month, April and May

Benefits to Participate for Academic Institutions

- Librarian is listed on the poster session as co-author and can reuse findings
- Mendeley to provide data analyzed specific to the institution; no individual user info can be released

Methods

Baseline/Current Context Analysis

Aggregated analysis on user adoption and productivity rate across worldwide users will first be conducted to establish the current as-is baseline. This will tell us the differences in behavior and activities of STEM versus non-STEM discipline areas as well as differences between academic statuses (undergraduates, graduates, post-docs, professors).

Selected, Longitudinal Study

With the cooperation and collaboration of 3-5 US and Canadian academic institutions, we will be following new users from January through May 2015 and examine their user behavior and usage of different learning and support resources. Both quantitative (data analysis) as well as qualitative (user survey) will be deployed to get detailed analytics as well as user feedback. In addition, reviews with librarians will also be conducted to get a thorough cross-section review.

Last, with the information from the baseline analysis as well as the selected longitudinal analysis, this will help both the software provider (Mendeley) as well as the librarian/information resources professionals to best charter the right designs and best practices to better enable students and researchers.

Analysis

- Mendeley user adoption is highly seasonal because of the influences of academic institutional terms
- Highest new user adoption months are September and January, matching to the start of new school terms

See Figure 1 in the Appendix.

- Mendeley active user numbers are also seasonal because of the influences of academic institutional terms
- A positive correlation ($R^2 > 0.5$) can be noticed in the active user numbers as new users continue to join Mendeley

See Figure 2 in the Appendix.

- “New user” adoption of the 6 partner universities seem to remain relatively consistent to the CONTROL line
- However, activities specifically at Stanford.edu, Yorku.ca, and MSU.edu have resulted in different patterns

See Figure 3 in the Appendix.

- “Active users” from the 6 partner universities seem to remain stable across all groups
- They appear relatively consistent from 2014 to 2015

See Figure 4 in the Appendix.

Library Activity Analysis

Definition

- Structured on-line (librarian initiated): library websites, LibGuide, tutorial videos
- Structured in-person (librarian initiated): classroom training, department updates, research group meetings, research day events, graduate/undergraduate services
- Ad hoc on-line (user initiated): online library chat, e-mail, phone call
- Ad hoc in-person (user initiated): in-library inquiry
- Social, promotions: blog, Twitter, Facebook, posters, eNewsletter

See Figure 5 in the Appendix.

- The 6 partner universities documented a total of 99 hours of libraries supporting Mendeley users during March through May 2015
- It is difficult to draw correlations based on limited data as well as not optimal user activity periods
- But it is interesting to see, again, the positive “new user” and “active user” activities during April in almost all the institutions

See Figure 6 in the Appendix.

See Figure 7 in the Appendix.

User Feedback: Learning Resources With Most Impact on Discipline

1. "Colleagues/collaborator" recommendation is the highest impact in all academic statuses
2. Professors are then most affected by "online video & tutorial" as well "newsletters and direct e-mails"
3. "Library website" has high impact on researchers
4. "Library training sessions" has high impact on PhDs

User Feedback: Learning Resources With Most Impact on Lengths of Usage

5. "Colleagues/collaborator" recommendation and "online video & tutorial" are almost equal in impact for all users
6. New users are most affected by various social media and direct communications (i.e., newsletter, department announcement)
7. "Library website" and "Library training sessions" are then secondarily effective for all users

Conclusion

Objective #1: To understand the user adoption pattern of a reference management tool such as Mendeley

- User adoption and user "activeness" is heavily influenced by seasonality
- Structured in-person training appears to have the most immediate impact on adoption numbers
- Other promotional activities (such as Research Day) seem to have a multiday effect

Objective #2: To understand differences between discipline and academic statuses and how they are affected by different learning and support resources

- "Colleagues/collaborator" recommendation is the highest influencer in all academic statuses as well as disciplines
- Professors are the most affected by "online video & tutorial" as well "newsletters and direct e-mails"
- Non-STEM disciplines (i.e., environmental sciences and humanities) are more favorable towards various library website and support services
- New users are most affected by various social media and direct communications (i.e., newsletter, department announcement)

Appendix

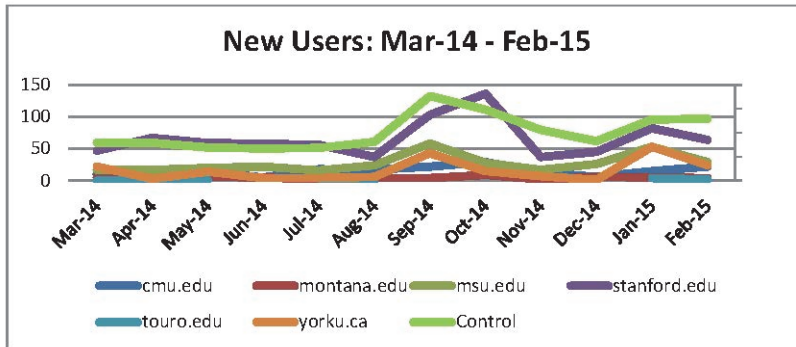


Figure 1. New users: Mar 14–Feb 2015.

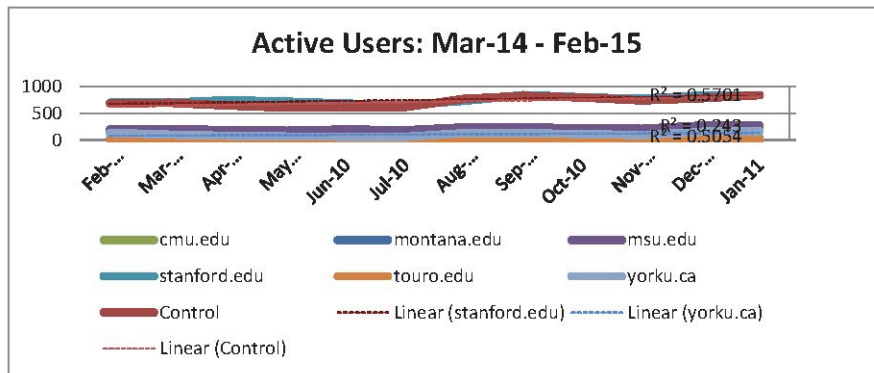


Figure 2. Active users: Mar 14–Feb 2015.

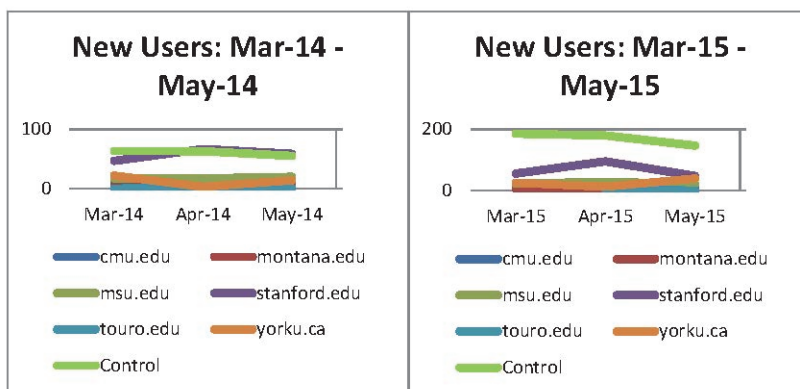


Figure 3. New users: Mar–May 2014; Mar–May 2015.

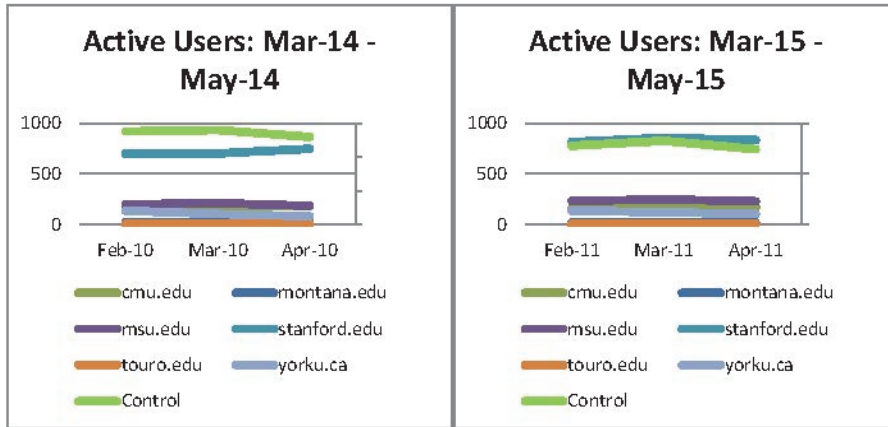


Figure 4. Active users: Mar–May 2014; Mar–May 2015.

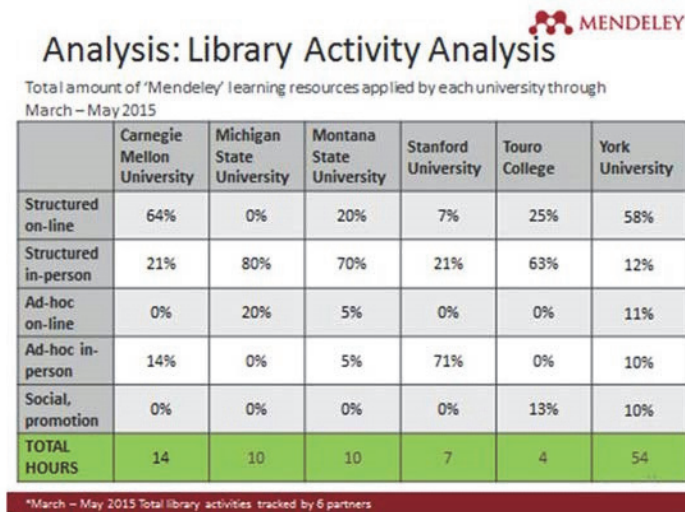


Figure 5. Analysis: Library activity analysis (Mendeley).

Analysis: Library Activity Analysis

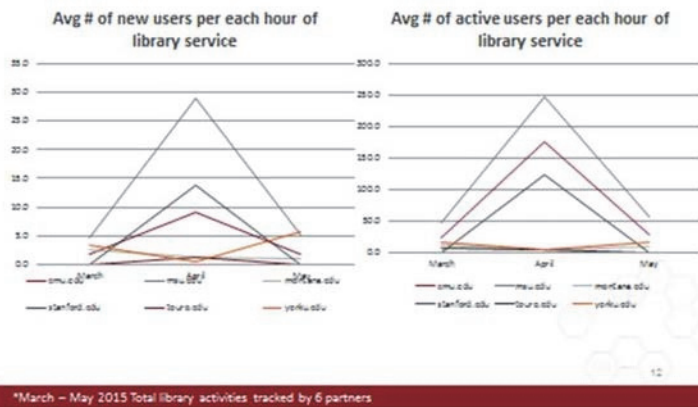


Figure 6. Analysis: Library activity analysis (Mendeley).

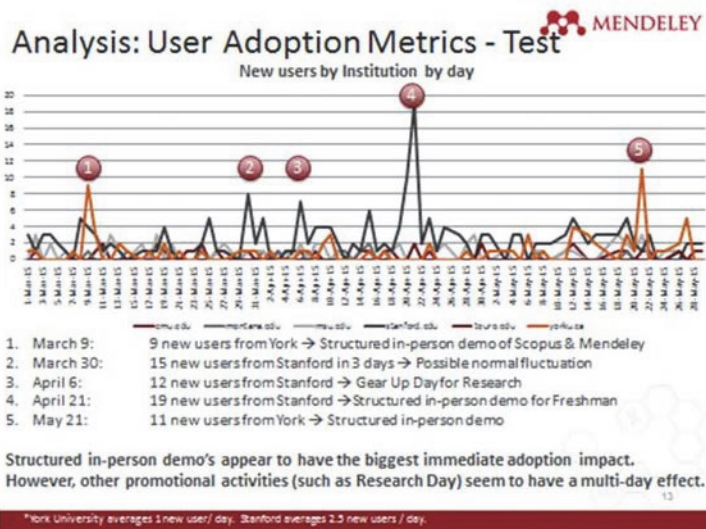


Figure 7. Analysis: User AdoptionMetrics – test (Mendeley).