Gold Open Access Publishing Rates Spanning 10 years in Science and Engineering Disciplines at Rowan University

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Gold Open Access Publishing Rates Spanning 10 years in Science and Engineering Disciplines at Rowan University

Dan Kipnis and Denise Brush
Rowan University Libraries
Glassboro, New Jersey

2023 STEM Libraries South
July 14, 2023
Overview

● We will share data from an analysis of 10 years (2013-2022) of Gold Open Access (OA) publications at Rowan university, a rising R2 public University in New Jersey.

● We will share STEM disciplinary differences in publication rates in Gold Open Access.

● We will conclude by sharing the publishers with the highest rate of publishing Gold Open Access for our Science and Engineering Faculty.
Definition of Gold Open Access

● “Published version with Creative Commons license, available on publisher platform. Documents are in journals which only publish open access”

Source: https://blog.scopus.com/posts/scopus-filters-for-open-access-type-and-green-oa-full-text-access-option#:~:text=Examples-,Gold,Article%20from%20Heliyon
Our research questions

1. Has Gold OA publication by our STEM faculty increased over the past 10 years?
2. How do Gold OA publications rates (as a % of total publications) compare between STEM fields?
3. Which publishers do our STEM faculty use for OA?
Our research method

- Used Scopus database to find Gold OA articles by STEM faculty at Rowan University
- Examined Gold OA and non-Gold OA publications from 2013 - 2022
- Analyzed data in a paper published earlier this year (Feb. 2023) in Science and Technology Libraries
Has Gold OA publication by our STEM faculty increased over the past 10 years? Combined increase of 176% since 2013.

Open access Publishing fund started 2017

Red line indicates start of fund
How do Gold OA publications rates (as a % of total publications) compare between our Science departments?

![Percent Gold OA - Sciences](chart)

- Biological & Biomedical Sciences: 36.89%
- Physics: 25.71%
- Chemistry & Biochemistry: 17.09%
- Mathematics: 13.89%
- Psychology: 11.18%
- Computer Science: 5.56%
How do Gold OA publications rates (as a % of total publications) compare between our Engineering departments?
Which publishers do our Science faculty use?

<table>
<thead>
<tr>
<th>Department</th>
<th>Most frequent publisher</th>
<th>Second most frequent publisher</th>
<th>Third most frequent publisher</th>
</tr>
</thead>
<tbody>
<tr>
<td>Biological Sciences</td>
<td>MDPI (31)</td>
<td>PLoS One (15)</td>
<td>Springer/Nature (10)</td>
</tr>
<tr>
<td>Chemistry</td>
<td>MDPI (24)</td>
<td>Elsevier (6) and PLoS One (6)</td>
<td>Frontiers (3)</td>
</tr>
<tr>
<td>Computer Science</td>
<td>Biomed Central (BMC) (2) and MDPI (2)</td>
<td>IEEE (1) and JMIR Publications (1)</td>
<td>Open Exploration (1) and Wiley (1)</td>
</tr>
<tr>
<td>Mathematics</td>
<td>Biomed Central (3)</td>
<td>American Physical Society (2)</td>
<td>American Statistical Association and nine others (1 each)</td>
</tr>
<tr>
<td>Physics</td>
<td>MDPI (31)</td>
<td>American Physical Society (10)</td>
<td>Springer/Nature (6)</td>
</tr>
<tr>
<td>Psychology</td>
<td>JMIR Publications (12)</td>
<td>PLoS One (5)</td>
<td>Frontiers &amp; BMC (4 ea.)</td>
</tr>
</tbody>
</table>
### Which publishers do our Engineering faculty use?

| Department                  | Most frequent publisher                                      | Second most frequent publisher | Third most frequent publisher |
|-----------------------------|(180,180),(818,184) | | | |
| Biomedical Eng.             | Springer Nature and MDPI (8 each)                           | Frontiers (5)                  | PLoS One (2)                 |
| Chemical Eng.               | MDPI (9)                                                      | RSC (4)                        | Elsevier (3)                 |
| Civil Eng.                  | MDPI (6)                                                      | Elsevier (5)                   | Pouyan Press (2)             |
| Electrical Eng.             | MDPI (8)                                                      | Optica (5)                     | Wiley (4)                    |
| Engineering Education       | MDPI (3)                                                      | Intl. Association of Online Eng. (1) | Pontificia Universidad Javeriana (1) |
| Mechanical Eng.             | MPDI (11)                                                     | Springer Nature and Elsevier (9 each) | AAAS (3)                    |
Conclusions

● In the six years (2017–2022) since an Open Access Publishing Fund was started, Open Access publications in STEM have increased 123%.

● Faculty whose research is related to biology (chemistry, biology, biomedical engineering) have significantly higher percentages of OA publication than those in other departments.
Conclusions

● PLoS One was one of the first Gold OA journals. Since its launch there have been many other publishers to follow their lead in the past ten years.

● MDPI, a publisher based in Switzerland, publishes over 420 journals in a variety of disciplines, all Gold OA with article processing fees.

● Many longtime STEM publishers, such as Elsevier, Wiley, Springer Nature, and others launched flagship Gold OA journals to accompany their traditional suite of journals.
Questions

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Slides available at: https://rdw.rowan.edu/lib_scholarship/45/