

Determining the Cost of Open Access: Estimating Annual Article Processing Charges for Science, Technology, Engineering, and Medicine Articles at a Large Midwestern University



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Background

Open Access Publishing &
Article Processing Charges



Open Access Publishing

■ Defining “open access”

- “digital, online, free of charge, and free of most copyright and licensing restrictions” (*Suber, 2015*)

■ Levels of open access (oversimplified)

- **Green OA** – authors self-archive pre-print or post-print in an independent open repository; may involve embargo period; no open access fee
- **Gold OA** – final published version made freely available on publisher’s website; no embargo period; authors may pay open access fee (APC)
- **Hybrid OA** – subscription journal that makes select articles freely available if authors pay APC; no embargo period



Article Processing Charges

- How much are “Article Processing Charges” (APCs)?
 - 2019 global per-journal average: **\$1,626**
 - 180% increase from \$904 in 2011 (*Morrison, 2021*)
 - 2018 average for gold/hybrid journals published by Elsevier, Sage, Springer-Nature, Taylor & Francis, and Wiley: **\$2,515** (*Butler, 2022*)

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Our Institution

Open Access Initiatives at IUPUI



Open Access Initiatives at IUPUI

- IUPUI adopted an Open Access Policy in 2014 (*IUPUI Faculty Council, 2014*)
- Paying APCs to support open access at IUPUI
 - Libraries-supported Open Access Fund, grants, faculty professional development funds, departmental funds, private faculty funds
 - Open Access Fund contributions: 50% from libraries, 30% from schools, 20% from campus research office
- Recent Open Access Fund spending (*IUPUI Center for Digital Scholarship, 2020*)
 - 2018-2019: **\$62,920** for 43 articles
 - 2019-2020: **\$81,286** for 46 articles
 - 2021-2022: **\$52,000** allocated in 10 days

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Our Research Project

Tracking APCs at IUPUI



Project Goals

■ Primary goal:

- Estimate total annual cost of APCs to fund open access to research conducted on the IUPUI campus

■ Secondary goal:

- Determine financial impact of APCs on the institution's research grants and on corresponding authors



Project Methodology

- Conducted affiliation search in Web of Science
 - OG=Indiana University-Purdue University Indianapolis
 - Limited results to 2019 and Gold OA or Hybrid OA articles
- Resulting list (**n=421**) exported to spreadsheet for further analysis
 - Is the corresponding author affiliated with IUPUI?
 - Does the funding statement acknowledge an IUPUI grant?
 - What is the current (2021) APC for the journal (in U.S. dollars)?



Project Results

- For the 421 articles analyzed:
 - Average APC was **\$2,609** (31 articles did not require APC)
 - 168 articles had an IUPUI-affiliated corresponding author
 - Total APC: **\$430,959**
 - 143 articles were published in DOAJ-indexed journals
 - Total APC: **\$349,700**
 - 100 articles acknowledged grant funding from IUPUI
 - Total APC: **\$274,688**

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Conclusions & Implications

Future of Open Access Funding
at IUPUI



Conclusions and Implications

- Financial impact of Open Access fees at IUPUI:
 - Annual cost for articles with IUPUI-affiliated corresponding author: **\$431,000**
 - Annual cost for articles with IUPUI-affiliated corresponding author published in Gold OA or Hybrid OA journals indexed by DOAJ: **\$350,000**
 - Total from IUPUI grants used to pay APCs in 2019: **\$275,000**
 - Expect APCs to increase **6%** annually
- Takeaway: our current OA funding model is unsustainable



Future of Open Access Funding at IUPUI

- New approaches to providing open access support to IUPUI-affiliated authors
 - Fall 2022: Limited support to articles authored by students, post-docs, and medical residents
 - Allowed us to fund 12 open access articles at cost of **\$21,016**
- 2025: Anticipating impact of [new federal public access policy](#) for federally-funded research publications
 - Publishers likely to expand APC-funded open access model



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THANKS!

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Questions?





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