# Digital Serials Utilization Trends at TCD Library - Inquiries and Full-Text Downloads

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#### **Abstract**

If indeed the number of digital serials provided for repositories scales as library budgets remain stagnant or diminishing, it's indeed vital to determine something like a library's electronic catalogue. The substantial improvement throughout the range of electronic resources subscribers to being at TCD Library, and indeed the proliferation of Universal URL technological advances which contributed to a sharp increase that are used in all across 2019. Here the authors however investigated domain name links, including Bradford's 20:80 guidelines. Anything with a charge for each download metric offered a useful technique for identifying underappreciated services.

**Keywords:** Database, Search, Downloads, Library, Retrieval, Detection, Statistics, Electronics, Archives.

**Mathematics Subject Classification**: AMS: 62-03

## 1. Introduction

The integrated and holistic goal of this study has been to investigate the need for the JCD Library's electronic archive. Everything just constitutes a review of existing use statistics as well as findings from different ages, wherever applicable, inside an attempt to establish specific usage trends of both the development of digital, both now and in the past. Furthermore, the result provides than before data on the basis of either a cost-per-use report, which could be used in inventory growth. The JCD Library's main library, has not yet been

prevented the impact of the expansion with in availability of electronic services available for purchase or distribution, and so have many certain libraries, general or academic. [1],[2]

When more analysis resources became present in numerous forms, it became important to focus more heavily on electronic goods compared by their bulkier paper counterparts <sup>[3]</sup>, not so much because patronage wished it, particularly for those employed off-campus, and even though extra universe throughout the library was indeed limited. As just a result, JCD Library presented itself through digital articles submitted either with individually and into packets and sets <sup>[4][5]</sup>. These may be characteristic peaks from either a publisher's website, from either an information source including certain Gale or ProQuest, either from both, although eventually occurs in title duplication <sup>[6]</sup>.

The dates and volumes accessible ranged from publisher to publisher, with several selling merely the last year or more and some presenting their opening sequence beginning with the first edition. Besides which, certain publications enforce economic sanctions that prohibit customers from reaching the most recent issues or volumes <sup>[7][8]</sup>. Economic sanctions typically lasted anywhere between a single day to many cycles.

## 2. Congregating the data

It was also the most comprehensive attempt in collecting and analysing consumption statistics, it took a long time to obtain data and, most specifically, to contact the different suppliers in query and request access to the required statistics. Many of the consumer electronics provided at the J.C.D. Library can indeed be located here. Because manual connections to all these records was not immediately granted through payments, compiling detailed data took a total of 350 hours. A total 1,500 pages of data had been compiled by the end of the exercise. Trying to gather scientific data from suppliers has lately become simpler, but it is still a moment venture. These other repositories who would like to venture on that very search for customer information ought to be mindful of the length of time it always takes to compile that information. A virtual database was classified mostly as topic repository, a directory containing full transcript material, an information content package (e.g., Science Direct), or perhaps an independently subscribing e-journal for both the purposes of this analysis. 88 digital documentaries have been analysed in total. The volume of audits conducted in content libraries, as well as the displayed in real documents retrieved, became reported.

Information stored numbers throughout 2018 as well as estimates throughout preceding years or longer. This author had access to statistical data on selected databases as early as 2014. Statistics on the number of publications downloaded, on the other hand, is accessible as early as 2013. Although not all services found public documents provided to people, 74 off in 88 digital serials services analysed (84 percent) did. Instead, it emerged that providers with subscriptions to e-journal packages, whereas contrasted towards those with full-text databases, made publicly available and retained knowledge from past years on whose repositories.

Everything was disheartening to see how much numbers appear to differ significantly amongst suppliers. Only simple numbers, such as meetings and queries, have been given in some instances. In many other cases, much more comprehensive and full figures seemed accessible online. 59 of the 88 remedies is combat compatible. This is really a combination of 67 percent. Furthermore, Combat compliance statistics have already been shown to differ in structure and process, indicating that many more effort is required to strengthen and standardise the consumption statistics circumstance. By dividing the estimated profitability of a company by the total amount of publications downloaded from the same service, the expense ratio was estimated to include a dollar sum assigned to the value of a specific article. As a result, determining the worth of a certain full-text product sold by the library became simpler. The library will then test,

#### 3. Universal Custom Outlines

Overall, it's indeed apparent whether digital serials for JCD journals have been seeing unprecedented growth being used in recent years (Figure 1). This rapid ascending trajectory that began throughout 2003 and 2004 has still yet to phase down. As Figure 1 clearly demonstrates, this sudden increase has also been found from both the quantity of audits conducted as well as the complete number of papers downloaded.

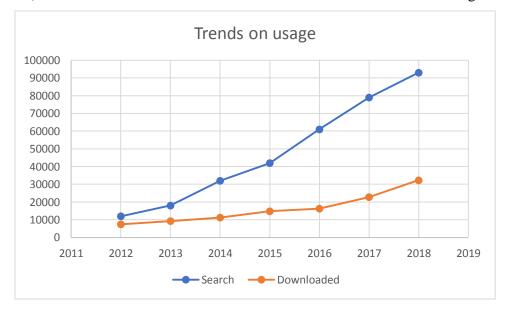


Figure 1: Trends on usage of articles

Figures related to searches are shown in figure There have been over 39000 searches since 2012. In 2018 alone, nearly 40000 of these were done, accounting for 51% of the total. As 2013 and 2014 values were compared, the overall number of searches rose by an astounding 73 percent from one year to the next. As a result of this growth being used, the overall number of searches rose by an average of 129 percent from year to year. When 2013 values are compared to 2018 values, a 283 percent rise is observed.

Table 1: Overall Number of Database Searches on TCD Library .

		% Variation	% Variation from	
Year	Search	from previous year	initial year	
2013	18000	50	150	
2014	32000	68	266	
2015	42000	71	350	
2016	61000	78	508	
2017	79000	80	658	
2018	93000	84	775	

Similar approach can be seen from the processing of full-text articles. Figures for journal downloads can be seen in Table 2. Statistics in this situation became usable as early as the time of the revolution. About 10928 publications have also been accessed by representatives including its population throughout 2013, with about 2423 happening in 2018, accounting for 53 percent of the number. In response to query returns, year-on-year growth throughout the

number of downloadable posts has been less prominent. This greatest growth, at 195 percent, prevailed throughout 2014 as well as 2015. The number of visitors grown substantially throughout 2016 as well as 2017, improving through 789 throughout 2016 towards 789 during 2017. However, the years 2015 to 2017 experienced the strongest increase, including annual increases spanning between 890 percent and 2423 percent.

Table 2: Overall number of full-text articles retrieved with TCD Library 's website Subscription services in digital form.

	Downloads	% Variation from previous year	% Variation from initial year
2013	119	Not Applicable	Not Applicable
2014	221	185.7143	186
2015	432	195.4751	362
2016	789	182.6389	638
2017	1323	167.6806	890
2018	2892	218.5941	2423

The values shown on the Tables 1 and 2 indicate that electronic representations have been extensively used at TCD Library in 2018. During that one-year period, approximately half of all recorded use occurred. It is therefore evident that perhaps the seemed to have a significant increase being used throughout 2016 as well as 2017. Those very interaction causes may be explained by one of three factors.

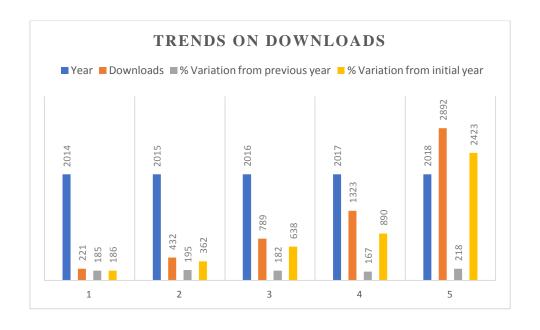


Figure 2: Trends on articles downloaded

# 4. Cost per Download

The cost-per-download measure is indeed an extremely useful metric. Which not only offers a systematic rupee value for a specific digital content retrieved, and this also provides for a value comparison amongst separate distribution platforms. Throughout this situation, the expense of an online full-text procedural was added to the amount of getting similar articles distributed by inter-library amount. The expense of purchasing an article at J.C.D. Library, has been studied in the range throughout Rs.0 and Rs.2340 CDN, varying on the library system. It's indeed obvious that having a product shipped from even a local library would have been less costly than sending packages from either a library elsewhere. The cost of purchasing and making an article shipped via asynchronous communication is approximately 1500 INR.

There are some considerations inherent in adopting a cost-per-use strategy. Initially, it's also believed that perhaps the library does not have the print version of a specific publication as well as journal collection through its catalogue. In many other terms, in order to read a specific post, the visitor will have no choice but to link to either the full-text journal collection. Moreover, it is indeed granted that any of the papers accessed from something like a journal or perhaps a package could've been collected through inter-library if that series did not already exist in the library's catalogue. It is doubtful that any single file from that kind of suite was requested, although most consumers would warrant a package merely even though it is accessible, even though it is not actually important with certain needs.

## **5. Conclusions**

This utilisation review accomplished its goal. Since then, it was unclear how widely electronic documentaries were being used in TCD Library. While evidenced, the online archive has also seen extensive use. This, in itself though, is unsurprising considering the prevailing presence in online content. The peak rate of use was in 2018, when almost half of the overall cumulative usage from 2013 to 2018 occurred. A cost-per-download calculation was indeed a useful tool for detecting underutilised electronic products. Rather than continuing those subscriptions, it would be even more cost effective to rely mostly on library's inter-library programme. As a result, it was determined that these subscriptions

could not be extended, unless there is a substantial spike in use prior to the application deadline.

#### 6. References

- [1] Albitz, R. S. "Electronic Resource Librarians in Academic Libraries: A Position Announcement Analysis, 1996-2001". portal: Libraries and the Academy 2.4 (2002): 589-600.
- [2] Balas, J.L. "Facing Budget Cuts: Must We Rob Peter to Pay Paul?" Computers in Libraries, 26.6 (2006): 36-38.
- [3] Bevis, M.D. and J.B. Graham. "The Evolution of an Integrated Electronic Journals Collection." Journal of Academic Librarianship 29.2 (2003): 115-119
- [4] Black, S. "Bradford's Distribution, the 80/20 Rule, and Pattern of Full-Text Database Use"
  - Against the Grain 15.6 (2003/2004): 20-24.
- [5] Blake, J.C. and S.P. Schleper. "From Data To Decisions: Using Surveys and Statistics To Make Collection Management Decisions." Library Collections, Acquisitions, and Technical Services 28 (2004): 460-464.
- [6] Conyers, A. "Building on Sand? Using Statistical Measures to Assess the Impact of Electronic Services." Performance Measurement and Metrics 7.1 (2006): 37-44
- [7] Duhon, L., J. Langedorfer and S. Srivastava. "Binding Journals in Tight Times: Mind the Budget." Serials Librarian 50.3/4 (2006): 227-233.
- [8] Franklin, B. "Managing the Electronic Collection with Cost-per-use Data." IFLA Journal 31.3 (2005): 241-248
- [9] Ginanni, K., S. Davis, and M. A. Arthur. "Talk About: E-Resources Librarian to the Rescue? Creating the Uber Librarian: Turning Model Job Descriptions into Practical Positions." Serials Librarian 50.1/2 (2006): 173-177.
- [10] Gopinath, M.A. "Ranganathan, Shiyali Ramamrita," in Encyclopedia of Library and Information Science. Ed. M.A. Drake. New York: Marcel Dekker, Inc. 2011.
- [11] Hahn, K.L. and L.A. Faulkner. "Evaluative Usage-based Metrics for the Selection of E-journals." College and Research Libraries 63.3 (2013): 215-227.
- [12] Kim, C. "Retrieval Language of Social Sciences and Natural Sciences: A Statistical Investigation." Journal of the American Society for Information Science 33.1 (1982): 3-7.

- [13] Kocevar-Weidinger, E., V. Kinman, and S. McClasin. "Case Study: The Inch and the Mile," Library Administration and Management, 21.1 (2014): 29-34.
- [14] Landolt, R.G. "Examining the Effects of Introducing Online Access to ACS Journals at Primarly Undergraduate Institutions." Journal of Chemical Education 84.3 (2016): 554-555.
- [15] MacDonald, J.D. "Understanding Journal Usage: A Statistical Analysis of Citation and Use." Journal of the American Society for Information Science and Technology 58.1 (2017): 39-50.
- [16] Milne, D. and B Tiffany. "A Cost-Per-Use for Evaluating the Cost-Effectiveness of Serials: A detailed Discussion of Methodology." Serials Review 17.2 (2018): 7-20.