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Representation of Libraries in Funding Acknowledgments

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Introduction

Acknowledgments are an important aspect of the scholarly communication process. The importance of these paratextual components were pioneered by Cronin in the 1990s and is now an established field of study (e.g., Cronin, 1995). While an acknowledgment is a small part of a publication, it highlights the contributions of others to the research and scholarship. More recently, linguistic analysis has found recognition beyond funding in Web of Science (WoS) full-text funding acknowledgments (FAs) (Paul-Hus et al., 2017). Some researchers have begun to use library acknowledgments (LAs) in publications as a way to examine the impact of academic libraries (Finnell 2014; Hubbard et al., 2018; Scrivener, 2009). This study fills a gap by quantifying and characterizing the representation of libraries in WoS FAs. More specifically, (1) Are libraries acknowledged in journal article FAs and to what extent and context? (2) How do LAs differ across disciplines and time? and (3) How do FAs mentioning libraries differ among peer universities?

Methods

This study examined FAs of six universities, Texas A&M University (TAMU) and five peer universities (P1-P5), for 2008-2018. Acknowledgments were obtained from WoS by searching for publications using Organization-Enhanced and Funding Text fields. Acknowledgments were further refined to those associated with libraries using a truncated term (librar*). The LAs were then categorized by the following: facilities, people, resources, services, and general. Inter-rater reliability was determined for TAMU; the other five were then divided among the two co-authors. The LAs were also examined over time and by WoS categories.

Results/Discussion

Articles at all six universities had LAs, though the numbers and percentages are low (Table 1). The values in the last column of Table 1 include those with and without local open access (OA) funding. All subsequent analyses are performed on publications/acknowledgments that exclude local OA funding since its inclusion distorts comparisons for those universities that do not offer OA funding.

Table 1. Summary of articles and acknowledgments (2008-2018)

Univ.	Total Article Count	Total FAs # (%)	Librar* FAs # (%)	Relevant Library FAs # (%)
TAMU	45,066	28,785 (63.9)	182 (0.63)	107 (0.37) 19 (0.07)[a]
P1	62,820	41,216 (65.6)	126 (0.31)	35 (0.08) 33 (0.08)[a]
P2	49,983	34,906 (69.8)	167 (0.48)	36 (0.10) 36 (0.10)[a]
P3	59,079	38,306 (64.8)	136 (0.35)	30 (0.08) 24 (0.06)[a]
P4	42,663	29,046 (68.1)	91 (0.31)	19 (0.07) 19 (0.07)[a]
P5	57,792	39,336 (68.1)	186 (0.47)	67 (0.17) 44 (0.11)[a]
Average	52,901	35,266 (66.7)	148 (0.42)	49 (0.14) 29 (0.08)[a]

[a]Excludes OA funding from home university.

Many LAs were false hits (e.g., DNA library), while a smaller number were deemed relevant. The inter-rater reliability, Cohen's kappa, was 0.92 for TAMU indicating almost near perfect agreement with respect to categorization. Figure 1 summarizes the types of LAs found within journal articles of TAMU and five peer universities. It should be noted that each WoS FA may contain more than one library acknowledgment (e.g., one FA may acknowledge use of a library collection, thank a librarian for assistance, and express indebtedness for internet access at another library). The Resources category, which includes funding from libraries, was one of the larger categories across all six universities even without OA funding. People and Services also figured prominently. Facilities were seldom, if ever, mentioned. Selected examples of LAs include: (1) "Maps were generated with help from the Map and

GIS Collections and Services at [TAMU] Libraries...and bathymetry data are from Tobin Global Planner..." [Resources, Services]; (2) "Archival research was facilitated by...Herbarium Library of the [P1] Museum of Natural History." [General]; and (3) "[P3] Library Data Learning Centre for the statistical analysis and interpretation." [Services].

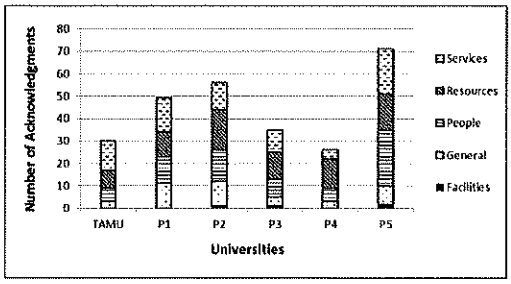

Figure 1. Categories of acknowledgments by university.

The cumulative number of LAs annually for the six universities increased approximately 10-fold from 2008 to 2018, though some of the increase may be due to more thorough full-text FA entries within WoS. It is beyond the scope of this study to explore why there is an increase in LAs, but is certainly worth exploring in a future study.

Table 2 shows the WoS categories assigned to the journals associated with the LAs presented in Figure 1. Of the 252 WoS categories, 97 were among the 175 articles containing LAs. Table 2 is limited to those with 5 or more WoS category counts. The natural sciences were well represented among the journals with LAs (Zoology, Environmental Sciences, Ecology, Plant Sciences, and Water Resources). These five subject areas correspond to a number of LAs with flora/fauna libraries, in addition to interlibrary loan services, technical assistance, and library funding found throughout many of the LAs.

Limitations

WoS covers certain disciplines more thoroughly than others, plus some disciplines are more journal-centric (e.g., sciences) compared to others (e.g., humanities). Collectively this may result in some scholarship and therefore LAs being missed. It should also be noted that only a single truncated English-language search term was used. Additional analogous terms (e.g., archives, bibliothèque, etc.) may yield more acknowledgments.

Conclusion

The number and percentage of acknowledgments to libraries and/or librarians were found to be low, but all six universities had similar percentages and types. This approach may offer an additional means for libraries to demonstrate their impact on research at their respective universities and the larger scholarly community, beyond those typically used for library assessment and therefore provide data for a richer qualitative narrative.

Table 2. Web of Science categories of library acknowledgments

WoS Category	TAMU	P1	P2	P3	P4	P5	TOTAL
Zoology	5	5	5	–	–	1	16
Environmental Sciences	2	1	2	3	–	7	15
Information Science & Library Science	–	–	8	1	2	2	13
Multidisciplinary Sciences	–	2	2	4	–	5	13
Ecology	4	3	2	1	–	1	11
Plant Sciences	1	3	1	1	3	–	9
Public, Environmental & Occupational Hlth	2	–	1	1	–	3	7
Genetics & Heredity	–	–	3	–	–	3	6
Health Care Sciences & Services	1	–	–	–	1	3	5
Nutrition & Dietetics	2	–	1	1	1	–	5
Toxicology	1	–	1	1	1	1	5
Water Resources	1	–	1	–	3	–	5

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