Journal of Kinesiology and Wellness
A Publication of the Western Society for Kinesiology and Wellness
Volume 14, Number 1, Pages 1-6, 2025
ISSN# 2323-4505

Use of Sports as a Label in Google Scholar Profiles

Duane Knudson
Department of Health & Human Performance, Texas State University

Author profiles in academic social media and database services are important research search, access, and promotion tools. This study documented the use and relevance of sports as research interest areas using the "label" function in Google Scholar Profiles. Profiles and citation metrics for the top twenty Google Scholar Citations Profiles were extracted for 22 sports and four sport terms. Citations to the top twenty profiles for each term were classified as relevant to that sport research interest label if there were at least four publications on that sport. The number of profiles using any of the 22 sport terms varied widely (*CV* = 122%), ranging from 22 for fencing to 549 for football/soccer. The mean (*SD*) relevant profiles across sports were 40 (17) percent and less variable (*CV* = 43%) than the citation metrics. There were moderate to strong associations in five of the six pairwise correlations. Several results indicate that use of specific sports as research areas with the label function to search Google Scholar Profiles should be interpreted cautiously. Many profiles using a sport as a label may not be related to the majority of highly cited publications on that sport. The number of profiles and citations to profiles related to sport keywords support previous research reporting large variation in citations using common kinesiology subdisciplines and research terms as labels for searches of Google Scholar Citations.

Keywords: author profile, bibliometrics, research focus, sport, subject area

Section: Article Manuscripts • doi.org/10.56980/jkw.v14i1.147

Academic publishing and indexing have transitioned almost completely to internet-based, online formats. This has increased the speed of bibliometric research, publication, and influenced how scholars work and promote their publications (Misra & Ravindran, 2022; Zhang & Li, 2020). Increasingly scholars are using author/researcher profiles within academic social media services like Academia.edu, ResearchGate, Open Researcher and Contributor ID [ORCID], university research management systems (Lee et al., 2022), or bibliometric database services like Google Scholar Citations, Scopus Author Identifier, and Web of Science Researcher ID (Kim & Grofman, 2020; Ortega, 2015b, 2017; Tetsworth et al., 2017). Author profiles assist with differentiating a scholar from others with similar names (Misra & Ravindran, 2022) and with the promotion of research, networking, and collaboration (Zhang & Li, 2020). Over the last decade, considerable research has reported differences in scholar usage of author profiles between disciplines and between different profile services (Alexi et al., 2024; Lee et al., 2022; Orduna-Malea & Delgado Lopez-Cozar, 2017; Ortega, 2015b, 2015a; Ortega & Aguillo, 2014; Tran & Lyon, 2017; Zhang & Li, 2020).

Research on the use of author profile services across disciplines usually focus on a few research subject areas using high-level disciplinary categories defined by databases (Ortega, 2015b, 2017; Ortega & Aguillo, 2014; Shtovba & Petrychko, 2021), so less is known about small and interdisciplinary subject areas like kinesiology. Initial research on author profile use of kinesiology scholars and kinesiology-related terms in bibliometric databases has been reported. Knudson (2022a) studied the top 20 Citations to kinesiology-related subdisciplinary keywords used as a "label" in Google Scholar Citations user's "Profile" feature [https://scholar.google.com/intl/en/scholar/citations.html]. Scholars with confirmed affiliations in kinesiology departments/schools contributed to most profiles, with only five of the 20 keywords and most top-cited scholars from other disciplines. A study of Google Scholar Profiles using several higher-level kinesiology disciplinary and professional terms as labels found wide variation in citations (Knudson, 2022b). Inconsistent use and citation of kinesiology-related terms in bibliometric and author profile services (Knudson, 2022b) pose a research visibility threat to kinesiology-related

Duane Knudson
The author has no conflicts of interest to disclose.
Correspondence concerning this article should be addressed to Duane Knudson, Department of Health & Human Performance, Texas State University, 601 University Drive, San Marcos, TX 78666-4684, United States

Section: Article Manuscripts • doi.org/10.56980/jkw.v1i1.147

research and scholars (Knudson, 2019).

Scholars using the profile and label tools in Google Scholar Citations to search for research or network for collaborators will find top-cited articles with vastly different citation totals across these user-defined keywords for research interest. Terms used for Google Scholar labels like "physical activity" or "exercise" garner 5 times more citations than "sport" (Knudson, 2023), while "sport psychology" will receive 15 times more citations than "sports coaching" or "sport sociology" (Knudson, 2022a). Using keywords with the "label" function in a Google Scholar Profile provides the advantages of author and discipline-specific terms and knowledge about that area of scholarship (Ortega & Aguillo, 2012). The disadvantages of unrestricted use of keywords as research labels are inconsistency in specificity and relevance of terms and their alignment with various subject categories assigned by bibliometric databases (Wahid & Mustafa, 2024). In kinesiology, for example, none of the top 20 Google Scholar Profiles using the "measurement" label were affiliated with kinesiology departments.

In contrast, 100% were affiliated with the labels "physical education" and "sport(s)_philosophy" (Knudson, 2022a). This study extended the initial studies of Google Scholar Profiles of kinesiology-related terms used as research interest areas by documenting the number of profiles using sport terms, their potentially relevant use by scholars as a research interest label, and the citations to top profiles. These data are important in understanding scholar interest in specific sports and the accuracy and consistency of use of these terms as key areas of a scholar's research agenda in their Google Scholar Profile.

Method

The *Profiles* feature within the Google Scholar Citations was used to study scholars' use of sport terms in describing their research areas of interest. Specifically, their use of sport terms using the *label* feature was a study focus. Google Scholar Profiles allow registered users to select up to five keywords or phrases as labels for their author profile. People with a Google Scholar Profile can correct/curate their indexed records, track citations, and network with other scholars. Google Scholar was used in this study because it provides the most comprehensive coverage of scholarly publications of all bibliometric database services (Delgado-Lopez-Cozar & Cabezas-Clavijo, 2013; Gusenbauer, 2019; Halevi et al., 2017; Harzing & Alakanagas, 2016; Martin-Martin et al., 2018, 2021; Meho & Yang, 2007). Google Scholar Profiles is also one of the more widely used author profiling services across disciplines (Ortega, 2017; Ortega & Aguillo, 2014; Zhang & Li, 2020).

A list of 40 common sports with worldwide participation was used to search Google Scholar Profiles. A typical search would be *label:field_hockey* or *label:golf*. The investigator searched and manually recorded the number of Google Scholar Profiles using each term by advancing the search results until the last profile was found. Following documentation on the number of profiles, the study collected additional data on the sports with at least 20 profiles using a sport as a label. Multiple versions of sport names (e.g., *hockey* and *ice_hockey*; *football* and *soccer*; *climbing* and *bouldering*) were also used to ensure that most all profiles intending to use the sport term in the English language as a label for research interest and with 20 or more profiles were documented. Data for sports combining synonymous or multiple terms for the same sport were merged and ranked by total author citations. In addition, searches of four additional sport terms (*sport*, *sport_coaching*, *sports_analytics*, and *sports_coaching*) were made for comparison to a previous study (Knudson, 2022a). These terms represented both long-term and recent areas of research interest and used both forms (*sport* and *sports*) that have different uses worldwide (Knudson, 2022a). The sport terms (n = 22) included in the study and additional comparison terms are presented in Table 1. Some examples of excluded sports with many profiles found were *American_Football*–3, *Archery*–11, *Field_Hockey*–6, *Lacrosse*–1, *Pickleball*–3, *Racquetball*–0, *Softball*–6, and *Table_Tennis*–19.

Citations for the 20 most cited articles of the top 20 Google Scholar Profiles for each included sport term were entered into an Excel spreadsheet. The investigator reviewed all the top 20 cited publications for each of the top 20 cited scholars for each sport/term(s). When top-cited scholar profiles were outside English, the Google Translate function checked publication titles. Scholars' profiles were deemed related to their purported sport label as a research focus if at least four (20%) of their top 20 cited publications included that specific sport. Twenty percent was deemed a reasonable number of highly cited publications indicative of a true research interest in a specific sport rather than a personal interest that would not have any or only a couple of publications unrelated to their scholarly agenda. Spreadsheet cells were identified as included or excluded data for sport-specific analysis of citations. Scholars can have several research foci, but four peer-reviewed publications on that topic were deemed necessary to count as research expertise/specialization, not just a personal interest or a few outlier studies on a sport. It was common to have highly cited scholars with no research specific to the sport they used as a Google Scholar Profile label. These scholars may use this label and the *alerts* tool of Google Scholar Citations to keep them informed on research on a sport of personal passion rather than scholarly research.

The four dependent variables examined in this study were: (1) Total Google Scholar Profiles (*Total GSP*), (2) Percentage Relevant Top 20 Profiles (*%Rel T20*), (3) Total Citations to Top 20 Profiles (*Tot CT20*), and (4) Mean Citations per Relevant Top 20 Profiles (*MC/RT20*) for the 22 sport and 4 sport comparison terms. Based on a previous study, the manually

Section: Article Manuscripts • doi.org/10.56980/jkw.v1i1.147

extracted and checked raw Google Scholar citation data errors were likely less than 1% (Knudson, 2023). This study also compared the reliability of the *%Rel T20* to the relevant percentage found for all the profiles of two randomly selected sports (*Cricket* n = 60 & *Tennis* n = 100). This analysis indicated that the reliability of the *%Rel T20* would likely be within 3 to 8 percentage points of the population of all profiles using that sport label. All searches were completed over several weeks, and data were rechecked for final analysis by May 14, 2024. Google Scholar data are updated twice a week and are not archived and linked to specific years like curated databases, so the study data are accurate as of May 14, 2024.

Data were imported and analyzed with *JMP® Pro 15.1.0* (SAS Institute, Cary, NC) software. Descriptive data reported included the mean, standard deviation (*SD*), coefficient of variation (*CV*), and median, given that the data had positive skews (γ = 0.89 to 3.44). Only the *%Rel T20* variable with the skew of 0.89 tested normal ($W = 0.93$, $p = .112$). Kendall's Tau was used to determine the associations between variables for the 22 sport terms because the skew resulted in most all plots with heteroscedasticity and outliers (Croux & Dehon, 2010). The type I error rate for statistical tests was set at $p < .05$, and significant associations were converted to Pearson r (Walker, 2003) to ease interpretation. Strengths of associations were interpreted as *weak/low* (± 0.30–0.49), *moderate* (± 0.50–0.69), *strong/high* (± 0.70–0.89), or *very strong/high* (± 0.90–1.0).

Results

Total GSP using the 22 sport terms varied widely (*CV* = 122%), ranging from 22 for *fencing* to 549 for *football/soccer* (see Tables 1 & 2). The most general comparison term, *sport*, had almost three times as many profiles as *football/soccer*. The more specific comparison terms (*sports_analytics*, *sports_coaching*, and *sport_coaching*) had Total GSP values generally similar to those of the 22 specific sports.

Most of the use of sport terms as a Google Scholar Citations research interest *label* was irrelevant based on the study standard of at least four top 20 cited publications on that sport. Only five of the 22 sports used as a research label had over a majority (*%Rel T20* > 50%) of relevant use of the sport terms examined. *Mean* (*SD*) *%Rel T20* was 40 (17) percent with moderate relative variability (*CV* = 45%). However, *Tot CT20* and *MC/RT20* varied widely, with 125% and 126% *CV*s, respectively.

Discussion

Novel results of this study include specific sport terms used as a *label* to specify research interest areas in scholars' profiles within Google Scholar Citations; these terms are likely relevant as an actual area of scholarly focus, and variation in citation patterns in these sports-related keywords. There was a large (almost 24 times) variation in scholars' use of one of 22 sport terms in their author profile, from 22 for *fencing* and 23 for *skiing* to 549 for *football/soccer*. There is no way to know the number of sport and kinesiology scientists worldwide. However, the relatively low numbers of *Total GSP* for these sports terms, given the likely many thousands of sport science researchers, is consistent with previous research reporting low percentages of scholars using author profile services (Ortega, 2015a; Ortega & Aguillo, 2014; Roszkowski, 2020; Tran & Lyon, 2017). Despite this likely low percentage of scholars reflected in the *Total GSP* in this study, there was a 44% and 51% increase in *Total GSP* for the comparison searches of *sports_analytics* and *sports_coaching* from the total reported for these terms two years ago (Knudson, 2022a). The larger number of profiles (124) using the label *sport_coaching* over *sports_coaching* is also consistent with previous research reporting the inconsistent use of the multiple plural forms of *sport* and *sports* throughout the world (Knudson, 2022a; Starosta & Petryuski, 2007). Inspection of *Total GSP* across sports supports the inference that using sport terms as research subject areas in Google Scholar Profiles may not follow the pattern of sport popularity or participation worldwide. The current study's high and low participation sports had low and high *Total GSP* numbers.

This study may be the first to explore the relevance of scholar specification of research interest using the Google Scholar Profile *label* function. Since the implementation of *Profiles* within Google Scholar Citations in 2011, there have been no controls over the use of label terms other than a limit of five per author profile [Ortega and Aguillo (2012); https://scholar.google.com/intl/en/scholar/citations.html]. Many scholars likely use the *label* and *alerts* functions of Google Scholar not to specify a major area of research work but a personal interest in a sport. The moderate (r = .26) positive association between *Total GSP* and *%Rel T20* supports the interpretation that no meaningful differences exist in the relevant use of research labels across sport popularity. People searching Google Scholar Profiles using sport terms as *labels* for scientific publications should expect a minority of the top-cited researchers to have a consistent research agenda aligned with those terms. While the reliability data indicate that *%Rel T20* is likely similar to the percentage for all profiles using that term, future research should confirm this hypothesis using several common kinesiology-related terms as labels.

While there was moderate variation (*CV* = 43%) of *%Rel T20* across sports, the *Total GSP*, citations, and citation rates were more variable (*CV* = 122% to 126%). There were moderate to strong (r = .26 to .75) positive associations between *Total GSP* and the three Google Scholar citation variables. The percentage of the relevant top-cited profiles (*%Rel T20*) was also moderately positively associated (r = .41) with the *Tot CT20* but not the average citations (*MC/RT20*) for the 22 sport terms. Together, these results and associations indicate

Table 1: *Descriptive Data for the Top 20 Google Scholar Profiles (GSP) Using Sport Labels*

Label	GSP	%Rel T20	CT20	MCR
Athletcis	100	75	33,810	2,254
Badminton	62	20	3,806	772
Baseball	34	40	13,176	1,647
Basketball	140	55	50,475	4,589
Boxing	24	25	1,604	321
Climbing/Bouldering	28	25	2,767	553
Cricket	60	60	7,735	1,289
Cycling	149	30	44,917	7,486
Fencing	22	25	219	44
Soccer	549	35	91,552	13,079
Golf	48	15	3,640	1,213
Gymnastics	79	60	12,991	1,083
Handball	69	45	5,749	639
Hockey/Ice Hockey	28	25	492	98
Rowing	31	45	7,183	798
Rugby	50	40	23,354	2,919
Running	129	55	102,024	9,275
Skiing	23	30	5,771	961
Swimming	189	40	32,799	4,100
Tennis	102	45	30,295	3,362
Volleyball	104	80	19,573	1,223
Wrestling	25	40	3,231	404
Median	61	40	10,363	1,218
Mean	93	40	22,564	2,641
SD	113	17	28,269	3,339

Note. GSP = Total Google Scholar Profiles; %Rel T20 = Percentage Relevant Top 20; CT20 = Total Citations to Top 20 Profiles; MC/RT20 = Mean Citations per Relevant Top 20 Profiles. Searches completed May 14, 2024.

Table 2: *Comparison Sport Terms*

Label	GSP	%Rel T20	CT20	MCR
Sport	>1,480	65	309,286	23,791
Sports_Analitics	239	10	20,523	10,262
Sports_Coaching	74	45	30,086	3,343
Sport_Coaching	124	65	47,526	2,376

Note. Comparison of Total Google Scholar Profiles (GSP) Using Sport Terms; %Rel T20 = Percentage Relevant Top 20; CT20 = Total Citations to Top 20 Profiles; MCR = Mean Citations per Relevant Top 20 Profiles.

Table 3: *Correlation (r) Matrix for Kinesiology-Related Journal Metrics Calculated from Kendall's Tau*

	%Rel T20	CT20	MCR
GSP	0.515*	0.867*	0.867*
%Rel T20		0.643*	0.452
CT20			0.976*

Note. Associations statistically significant ($p < .05$)*. Kendall's τ values were converted to correlation coefficients r (Walker, 2003).

Section: Article Manuscripts • doi.org/10.56980/jkw.v1411.147

Section: Article Manuscripts • doi.org/10.56980/jkw.v1i1.147

that Google Scholar users should not consider total citations to a specific scholar's Google Scholar Profile, given a specific sport of interest as a label, as likely research productivity on that sport. The wide variation in scholars' use of GSP (*Total GSP*) and the minority of scholars with relevant profiles (*%Rel T20*) indicate partial specificity of this strategy. Multiple and careful searching of the whole Google Scholar service and other databases is a superior strategy to identify all relevant sport research or scholar expertise (Gusenbauer & Haddaway, 2020; Knudson, 2022b; Vaughan & Thelwall, 2004).

The limitations of this study include the 40 specific sports terms that were searched for and the one-time running snapshot of citation data provided by Google Scholar Citations. The relevance of sports keywords as labels varies due to the inconsistency of keyword use by scholars using GSP and the 20% standard sport alignment standard in this study.

Conclusion

Use of specific sports as research areas using the *label* function to search Google Scholar Profiles should be interpreted with caution. Many profiles using a sport as a label may not be related to many highly cited publications on that sport. The number of profiles and citations to profiles related to sport keywords support previous research reporting large variation in citations using common kinesiology subdisciplines and research terms as labels for searches of Google Scholar Citations.

License

References

Alexi, A., Lazebnik, T., & Rosenfeld, A. (2024). The scientometrics and reciprocality underlying co-authorship panels in google scholar profiles. *Scientometrics*. https://doi.org/10.1007/s11192-024-05026-y

Croux, C., & Dehon, C. (2010). Influence functions of the spearman and kendall correlation measures. *Statistical Methods & Applications*, *19*, 497–515. https://doi.org/10.1007/s10260-010-0142-z

Delgado-Lopez-Cozar, E., & Cabezas-Clavijo, Á. (2013). Ranking journals: Could google scholar metrics be an alternative to journal citation reports and scimago journal rank? *Learned Publishing*, *26*(2), 101–114. https://doi.org/10.1087/20130205

Gusenbauer, M. (2019). Google scholar to overshadow them all? Comparing the sizes of 12 academic search engines and bibliographic databases. *Scientometrics*, *118*(1), 177–214. https://doi.org/10.1007/s11192-018-2958-5

Gusenbauer, M., & Haddaway, N. R. (2020). What academic search systems are suitable for systematic reviews or meta-analyses? Evaluating retrieval qualities of google scholar, PubMed, and 26 other resources. *Research Synthesis Methods*, *11*(2), 181–217. https://doi.org/10.1002/jrsm.1378

Halevi, G., Moed, H., & Bar-Ilan, J. (2017). Suitability of google scholar as a source of scientific information and as a source of data for scientific evaluation—review of the literature. *Journal of Informetrics*, *11*(3), 823–834. https://doi.org/10.1016/j.joi.2017.06.005

Harzing, A.-W., & Alakanagas, S. (2016). Google scholar, scopus and the web of science: A longitudinal and cross-disciplinary comparison. *Scientometrics*, *106*, 787–804. https://doi.org/10.1007/s11192-015-1798-9

Kim, H. J., & Grofman, B. (2020). Who creates a google scholar profile? *PS: Political Science & Politics*, *53*(3), 515–520. https://doi.org/10.1017/S1049096520000189

Knudson, D. (2019). Kinesiology's tower of babel: Advancing the field with consistent nomenclature. *Quest*, *71*(1), 42–50. https://doi.org/10.1080/00336297.2018.1492427

Knudson, D. (2022a). Citations in google scholar profiles by kinesiology subdiscipline. *Journal of Kinesiology and Wellness*, *11*, 25–33. https://www.jkw.wskw.org/index.php/jkw/article/view/102

Knudson, D. (2022b). What kinesiology research is most visible to the academic world? *Quest*, *74*(3), 285–298. https://doi.org/10.1080/00336297.2022.2092880

Knudson, D. (2023). Top google scholar citations to kinesiology-related terms. *International Journal of Kinesiology in Higher Education*, *7*(2), 122–129. https://doi.org/10.1080/24711616.2022.2111284

Lee, D. J., Stvilia, B., Ha, S., & Hahn, D. (2022). The structure and priorities of researchers' scholarly profile maintenance activities: A case of institutional information management systems. *Journal of the Association for Information Science and Technology*, *74*, 186–204. https://doi.org/10.1002/asi.24721

Martin-Martin, A., Orduna-Malea, E., Thelwall, M., & Lopez-Cozar, E. D. (2018). Google scholar, web of science, and scopus: A systematic comparison of citations in 252 subject categories. *Journal of Informetrics*, *12*(4), 1160–1177. https://doi.org/10.1016/j.joi.2018.09.002

Martin-Martin, A., Thelwall, M., Orduna-Malea, E., & Lopez-Cozar, E. D. (2021). Google scholar, microsoft academic, scopus, dimensions, web of science, and OpenCitations' COCI: A multidisciplinary comparison of coverage via citations. *Scientometrics*, *126*, 871–906. https://doi.org/10.1007/s11192-020-03690-4

Meho, L. I., & Yang, K. (2007). Impact of data sources on citation counts and rankings of LIS faculty: Web of science versus scopus versus google scholar. *Journal of the American Society for Information Science*, *58*(13), 2105–2125. https://doi.org/10.1001/asi.20677

Misra, D. P., & Ravindran, V. (2022). Researcher, author and reviewer profiles. *Journal of the Royal College of Physicians of Edinburgh*, *52*(4), 282–284. https://doi.org/10.1177/14782715221139591

Orduna-Malea, E., & Delgado Lopez-Cozar, E. (2017). Performance behavior patterns in author-level metrics: A disciplinary comparison of google scholar citations, ResearchGate, and ImpactStory. *Frontiers in Research Metrics and Analytics*, *2*, 14. https://doi.org/10.3389/frma.2017.00014

Ortega, J. L. (2015a). Disciplinary differences in the use of academic social networking sites. *Online Information Review*, *39*(4), 520–536. https://doi.org/10.1108/OIR-03-2015-0093

Ortega, J. L. (2015b). How is an academic social site populated? A demographic study of google scholar citations population. *Scientometrics*, *104*, 1–18. https://doi.org/10.1007/s11192-015-1593-7

Ortega, J. L. (2017). Toward a homogenization of academic social sites: A longitudinal study of profiles in academia.edu, google scholar citations and ResearchGate. *Online Information Review*, *41*(6), 812–825. https://doi.org/10.1108/OIR-01-2016-0012

Ortega, J. L., & Aguillo, I. F. (2012). Science is all in the eye of the beholder: Keyword maps in google scholar citations. *Journal of the American Society for Information Science and Technology*, *63*(12), 2370–2377. https://doi.org/10.1002/asi.22761

Ortega, J. L., & Aguillo, I. F. (2014). Microsoft academic search and google scholar citations: Comparative analysis of author profiles. *Journal of the Association for Information Science and Technology*, *65*(6), 1149–1157. https://doi.org/10.1002/asi.23036

Roszkowski, M. (2020). The sociological and ontological dimensions of the knowledge organization domain in google scholar citations. *Knowledge Organization*, *47*(2), 160–172. https://doi.org/10.5771/0943-7444-2020-2-160

Shtovba, S., & Petrychko, M. (2021). An algorithm for topic modeling of researchers taking into account their interests in google scholar profiles. *CMIS-2021: Fourth International Workshop on Computer Modeling and Intelligent Systems*, *2864*, 299–311. https://ceur-ws.org/Vol-2864/paper26.pdf

Starosta, W., & Petryuski, W. (2007). Selected problems in international terminology of the human movement science. *Kinesiology*, *39*(1), 5–14. https://hrcak.srce.hr/file/24080Test

Tetsworth, K., Fraser, D., Glatt, V., & Hohmann, E. (2017). Use of google scholar public profiles in orthopedics: Rate of growth and changing international patterns. *Journal of Orthopaedic Surgery*, *25*(1), 1–7. https://doi.org/10.1177/230949901769032

Tran, C. Y., & Lyon, J. A. (2017). Faculty use of author identifiers and researcher networking tools. *College & Research Libraries*, *78*(2), 171–182. https://doi.org/10.5860/crl.78.2.171

Vaughan, L., & Thelwall, M. (2004). Search engine coverage bias: Evidence and possible causes. *Information Processing & Management*, *40*(4), 693–707. https://doi.org/10.1016/S0306-4573(03)00063-3

Wahid, E. E. A., & Mustafa, A. (2024). Local content expert-assigned taxonomy with library of congress subject headings (LCSH): A comparative analysis. *Journal of Information and Knowledge Management*, *14*(1), 117–128. https://ir.uitm.edu.my/id/eprint/94558

Walker, D. A. (2003). JMASM9: Converting kendall's tau for correlation or meta-analytic analyses. *Journal of Modern Applied Statistical Methods*, *2*(2), 525–530. https://doi.org/10.22237/jmasm/1067646360

Zhang, L., & Li, C. (2020). Investigating science researchers' presence on academic profile websites: A case study of a canadian research university. *Issues in Science and Technology Librarianship*, *95*. https://doi.org/10.29173/istl51

Section: Article Manuscripts • doi.org/10.56980/jkw.v14i1.147