Bibliometric Analysis of the L2 Writing Journal

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Abstract
While researchers have begun to clarify the status of L2 writing studies, past bibliometric assessments of L2 writing research may still designate it as a field of applied linguistics. They sought the topic of L2 writing in key databases and journals, retrieved relevant publications, and ran a bibliometric analysis. They might increase the number of papers for review, but they undermine the value and influence of specialized publications, notably the flagship journal of L2 writing. The goal of this study was to undertake a bibliometric analysis of 656 publications published in the L2 Writing Journal from 2002 to June 2021, retrieved from WoS and based on HistCite Pro. The HistCite graph marker indicated 30 articles as nodes and 59 combinations of nodes as links. Four out of the five clusters on the citation map originated in 2003, demonstrating that major research issues emerged in the year and took root in subsequent studies. This study concludes with recommendations for further research.

Introduction

Second language studies have stayed in the shadow for a long time. When applied linguistics started at the end of the nineteenth century, literary texts no longer dominated. Therefore, it emphasized speech more than written texts, regulating L2 writing as its subfield (Matsuda, 2003). L2 writing remained a minor field of applied linguistics until the 1980s when it finally developed into a unique terrain (Hyland, 2019). After that, numerous L2 writing theories emerged, matured, and developed into a comparably

perfect system (Liu & Wei, 2020). Nevertheless, even though researchers have paid more attention to the field of L2 writing, its current trends and status are still unsettled.

Lately, researchers have attempted to capture the local and global shifts and changes in the terrain of second language studies. Locally, Fatimah and Masduqi (2017) conducted a literature review of L2 writing studies in Indonesia, grouping them into studies on writing products, the writing process, and a genre-based approach. In addition, Liu and Wei (2020) chose the L2 writing studies published in eight primary foreign language journals in China and performed a statistical analysis to examine their numbers of publications, research content, research categories, and development trends. Globally, Arik and Arik (2017) did a bibliometric analysis of L2 writing studies fetched from the Web of Science (WoS) to capture the development and trends of L2 writing research. Between 1900 and 2013, a total of 266 L2 writing publications were published in the Web of Science, the bulk of which were in the linguistics research area (92 percent). Articles, book reviews, and bibliographies had an average of 1.64 authors per publication, suggesting a low level of collaboration among scholars.

Although researchers have begun to identify the status of L2 writing studies, past bibliometric analyses of L2 writing research may still treat it as a subfield of applied linguistics. They searched for the topic of L2 writing in core databases and journals, collected related publications, and performed a bibliometric analysis. They might increase the number of publications for examination, but they dilute the importance and contribution of individual journals, especially the flagship journal of L2 writing. The L2 Writing Journal (J. Second Lang. Writ.), launched in 1992, is the first specialized journal on L2 writing (Jun, 2008). It is the flagship publication of L2 writing because not only does it present current L2 writing research, but it also works as a change agent, being proactive and directing study (Iso-Ahola, 2009, p. 301). More importantly, it promotes L2 writing studies as a legitimate area of research. Thus, mapping and conducting a bibliometric analysis of it might yield valuable information for future L2 writing research.

No single bibliometric study exists that focuses on a flagship journal in the field of L2 writing. In addition, researchers have not utilized the software HistCite Pro to deploy a bibliometric analysis on this topic. Therefore, the specific objective of this study was to perform a bibliometric analysis of 656 documents published in the L2 Writing Journal from 2002 to June 2021, retrieved from WoS and based on HistCite Pro.

An Overview of Bibliometric Analyses

Due to the numerous publications annually, it is difficult for researchers to present a coherent account of the trend in an academic field. As a result, interest in bibliometric analysis is growing (Meara, 2014). Bibliometrics is a quantitative method that employs mathematical and statistical tools to analyze the interconnections and influences of published studies within a particular field of study (Lee et al., 2020). Researchers often rely on content or citation analysis as a bibliometric method (Ellegaard & Wallin, 2015). Its quantitative output mainly includes the number of publications, researchers, and vocabulary items (Liu et al., 2021). Researchers have employed it for several reasons: to detect developing trends in article and journal performance, cooperation patterns, and research elements, and to study the intellectual structure of an area in the current literature (Donthu et al., 2021).

The growth of bibliometric studies has rapidly increased since the late 1960s and has grown into a distinctive scientific discipline since the beginning of the 1980s (Glänzel & Schoepflin, 1994). Scholars have widely deployed bibliometric analysis in the natural and life sciences, but few have focused on the humanities (Nederhof et al., 1989). Meara (2014) conducted a co-analysis of 201 papers published in Modern Language Journal from 1916 to 2010, attempting to illustrate the trend of vocabulary acquisition research. The study found that the recent papers in this journal are more inward-looking and self-referential than the previous ones. It suggested future studies select journals more cautiously to avoid bias.

By the same token, after conducting a bibliometric analysis of L2 vocabulary studies published in 1983, Meara (2015) concluded that a coherent approach to vocabulary research has not emerged based on the identified research clusters. Arik and Arik (2015) explored the bibliometric aspects of World English (WE) studies from 1975 to 2013 based on the Social Sciences Citation Index and the Arts & Humanities Citation Index of the WoS. Interestingly, it was only until 2005 that the number of studies started to increase, and most of them appeared between 2005 and 2013. The study predicts that the number will grow continuously.

More recently, Radev et al. (2016) analyzed academic papers compiled by the Association for Computational Linguistics to uncover the most central authors and their research, the correlation between different ranking measures, and the patterns of the overall impact of various venues in computer linguistics. Arik and Arik (2017) examined the bibliometric indicator of L2 writing research in WoS. They pointed out that the

number of L2 writing studies will increase in the future and that linguistics and education influence L2 writing more greatly. While Arik and Arik's study (2017) is the first bibliometric analysis on L2 writing, they may overlook the importance and contribution of the flagship journal, Journal of Second Language Writing.

Methods

Data Source

The data for the study came from the Web of Science (WoS). While WoS is no longer the only citation analysis tool available, its quality is better than Google Scholar's, and it remains one of the primary sources for citing data (Mongeon & Paul-Hus, 2016). I searched and retrieved the data from the WoS through the online library of the Central Taiwan University of Science and Techno-logy on Oct. 11, 2021. The public-ation title, Journal of Second Language Writing, was the search phrase. The obtained publication began in 2002 and terminated in 2021.The total number of publications was 656.

Bibliometric Software

This study employed the bibliometric software, HistCite Pro, to analyze the 656 documents in the L2 Writing Journal. HistCite Pro is a click-and-run version of the original HistCite that generates the citation network, developed by Qing Wang of the Chinese Academy of Science, with similar features to HistCite (He et al., 2020). HistCite, created by Garfield and Istomin, made its debut at the 65th annual conference of the American Society for Information Science and Technology on November 8, 2002 (Barreiro, 2015).

It has the capability of precisely locating a discipline's popular topics, historical progress, ongoing development, and future trends from complex and diverse material (Liu & Wang, 2020). Besides, it creates historiography in chronological order, highlights the most frequently mentioned works in the retrieved data, and enlists authors, journals, institutions, and vocabulary rankings (Garfield, 2009). Vocabulary analyses, which show the frequency of singular terms and title word pairs, are newer features (Garfield & Pudovkin, 2004).

Results

Annual Output of the L2 Writing

The yearly publishing data for the journal are shown in Table 1. As indicated in Table 1, the publishing year 2019 had the largest number of publication records, followed by 2017 and 2013. The publishing year of 2012 rated top for the overall local citation ratings (TLCS), whereas the years 2003 and 2004 placed second and third individually. The year 2003 rated top in terms

of the overall global citation ratings (TGCS), followed by 2004 and 2007.

Table 1

Yearly Output of the L2 Writing Journal

#	Publication Year	Recs	Percent	TLCS	TGCS
1	2002	20	3.0%	0	540
2	2003	20	3.0%	124	1480
3	2004	23	3.5%	115	1368
4	2005	18	2.7%	68	903
5	2006	18	2.7%	68	986
6	2007	18	2.7%	105	1357
7	2008	20	3.0%	85	1068
8	2009	26	4.0%	66	1049
9	2010	20	3.0%	66	516
10	2011	27	4.1%	77	779
11	2012	40	6.1%	145	1315
12	2013	48	7.3%	97	818
13	2014	41	6.3%	77	703
14	2015	42	6.4%	58	735
15	2016	33	5.0%	37	522
16	2017	53	8.1%	58	421
17	2018	44	6.7%	33	227
18	2019	60	9.1%	19	200
19	2020	45	6.9%	0	106
20	2021	40	6.1%	0	9

Recs=Records; TLCS=Total Local Citation Score; TGCS=Total Global Citation Score

Countries

Table 2 shows the top ten countries with the most publication records in the Journal of Second Language Writing. HistCite Pro could not recognize the publication sites of 19 papers and labeled them as unknown because the concerned authors may not have registered them (Wu, 2018). As indicated by the table, The United States of America, the People's Republic of China, and the United Kingdom were placed first, second, and third in terms of publishing records. The United States of America is the top nation in terms of publication records, with 376 pieces in the flagship journal. Arik and Arik (2017) noted the same thing: the United States of America was the most prolific nation in terms of publications, accounting

for 65.41 percent of all L2 writing studies covered by WoS.

Table 2

Top Ten Countries with the Most Publication Records

#	Country	Recs	TLCS	TGCS
1	USA	376	579	5864
2	People's R China	90	144	2222
3	UK	33	99	1476
4	Canada	31	74	707
5	Japan	30	47	630
6	Australia	27	81	978
7	Unknown	19	107	1265
8	New Zealand	21	67	808
9	Spain	17	20	240
10	Taiwan	11	34	698

As indicated by Hunter (2006), acknowledging sources is critical since ideas are like the money of academics. Consequently, academics want to amass that cash; they desire recognition for their accomplishments. When writers reference ideas, they pay homage to those who conceived them. TLCS stands for the total number of local citations in the collection. Users can see it on the lists of authors and sources (Barreiro, 2015). It serves as a measurement of noteworthy authorship since it indicates how much credit authors receive from their peers in the publication.

Table 3

Top Five Countries by Total Local Citation Score

#	Country	Recs	TLCS	TGCS
1	USA	376	579	5864
2	People's R China	90	144	2222
3	Unknown	19	107	1265
4	UK	33	99	1476
5	Australia	27	81	978

Table 3 illustrates the top five countries by the total local citation score. Data from this table can be compared with the data in Table 2, which shows that the United States of America, the People's Republic of China, and the United Kingdom ranked the same for the total local citation score.

Table 4 displays the top ten nations by total global citation score in the L2 Writing Journal. The Global Citation Score (GCS) is a numerical value that indicates the total

number of citations as reported by Web of Science. Consider the United States of America as an example. As indicated in the table, WoS authors mentioned the authors from the nation in the L2 Writing Journal 5,864 times between 2002 and 2021. As demonstrated in Table 4, the United States of America, the People's Republic of China, and the United Kingdom led in this category. Interestingly, the top three nations were the same for publication records, and the overall local and global citation ratings.

Table 4

Top Ten Countries by Total Global Citation Score

#	Country	TLCS	Recs	TGCS
1	USA	579	376	5864
2	People's R China	144	90	2222
3	UK	99	33	1476
4	Unknown	107	19	1265
5	Australia	81	27	978
6	New Zealand	67	21	808
7	Canada	74	31	707
8	Taiwan	34	11	698
9	Japan	47	30	630
10	Sweden	37	9	418

Table 5

Top Fifteen Institutions for Publication Records

#	Institution	Recs	TLCS	TGCS
1	Purdue Univ	92	35	196
2	Georgia State Univ	23	81	706
3	Univ Hong Kong	19	42	537
4	Arizona State Univ	17	27	206
5	Ohio State Univ	12	11	276
6	Penn State Univ	12	22	219
7	Univ Arizona	12	22	83
8	Univ Auckland	12	24	263
9	Chinese Univ Hong Kong	11	29	387
10	City Univ Hong Kong	11	46	566
11	Michigan State Univ	11	29	245
12	Univ British Columbia	11	24	152
13	Univ Melbourne	11	58	757
14	No Arizona Univ	8	27	262
15	Univ London	8	39	669

Institutions

Table 5 covers the top fifteen colleges by publication records in the L2 Writing Journal. Purdue University ranked first with 92 publication records, followed by Georgia State University, the University of Hong Kong, and Arizona State University. From the statistics in Table 5, it can be observed that eight out of the 15 institutions were in the United States. This result is not unexpected given that the United States is the nation with the most publishing records, TLCS, and TGCS.

Table 6 indicates the top ten institutions for the total local citation scores. Georgia State University, with a total citation score of 81, was rated top, followed by the University of Melbourne, the California State University at Sacramento, the City University of Hong Kong, and the National Tsing Hua University. As Table 6 reveals, three out of the fifteen institutions were from Asia, including the City University of Hong Kong, the National Tsing Hua University, and the University of Hong Kong.

Table 6

Top Ten Institutions by Total Local Citation Score

#	Institution	Recs	TLCS	TGCS
1	Georgia State Univ	23	81	706
2	Univ Melbourne	11	58	757
3	Calif State Univ Sacramento	4	47	437
4	City Univ Hong Kong	11	46	566
5	Natl Tsing Hua Univ	4	43	517
6	Univ Hong Kong	19	42	537
7	Univ London	8	39	669
8	Univ Lancaster	4	38	255
9	Purdue Univ	92	35	196
10	Auckland Univ Technol	4	34	507

Table 7 presents the top ten universities by total global citation scores. With a total global score of 757, the University of Melbourne was rated the highest, followed by Georgia State University, the University of London, the City University of Hong Kong, and the University of Hong Kong. The University of Melbourne and Georgia State University were the two most important institutions in the L2 Writing Journal in terms of their total local and worldwide citation rating

Table 7

Top Ten Institutions by Total Global Citation Score

#	Institution	Recs	TLCS	TGCS
1	Univ Melbourne	11	58	757
2	Georgia State Univ	23	81	706
3	Univ London	8	39	669
4	City Univ Hong Kong	11	46	566
5	Univ Hong Kong	19	42	537
6	Natl Tsing Hua Univ	4	43	517
7	Auckland Univ Technol	4	34	507
8	Calif State Univ Sacramento	4	47	437
9	Brigham Young Univ	3	11	406
10	Chinese Univ Hong Kong	11	29	387

Keywords

Keywords refers to the terms that appear in the journal's article titles and keyword lists. They represent the central idea of an article and are the most essential aspect of citation analysis study (Wu, 2018).

Table 8

Top Fifteen Keywords in Publication Records

	Keywords	Recs	TLCS	TGCS
1	WRITING	448	799	10057
2	LANGUAGE	221	311	3019
3	SECOND	179	204	1914
4	SCHOLARSHIP	78	6	57
5	BIBLIOGRAPHY	75	0	11
6	RECENT	75	0	11
7	SELECTED	73	0	11
8	WRITERS	58	119	1358
9	RESEARCH	57	92	1115
10	ENGLISH	55	73	1117
11	ACADEMIC	53	80	983
12	STUDENTS	42	109	1476
13	FEEDBACK	38	163	2283
14	STUDENT	35	133	1673
15	GENRE	32	119	1285

Table 8 counts the top fifteen keywords in the L2 Writing Journal for publication records. The five most used terms were writing (68.3 percent), language (33.7 percent), second (27.3 percent), scholarship (11.9 percent), and bibliography (11.4 percent). We can see that the journal elicited serious and detailed studies on second language writing. In addition, as demonstrated by the statistics, it stressed more on the components of second language writing than Second Language writers because the keyword "writing" was more frequently used than the term "writer.

Table 9 provides the top ten keywords in the journal based on the overall local citation scores. It shows citations earned by studies containing certain keywords from other journal articles. It also indicates how much credit the publication's writers give to the research containing the keywords. Data from this table may be compared with the data in Table 8, which reveals that the top three keywords were the same for both tables. The data demonstrate that the journal was a specialized journal of L2 writing. Furthermore, feedback and written products were two prominent themes in this publication in terms of its overall local citation ratings.

Table 9

Top Ten Keywords by Total Local Citation Score

#	Keywords	Recs	TLCS	TGCS
1	WRITING	448	799	10057
2	LANGUAGE	221	311	3019
3	SECOND	179	204	1914
4	FEEDBACK	38	163	2283
5	WRITTEN	31	135	1353
6	STUDENT	35	133	1673
7	GENRE	32	119	1285
8	WRITERS	58	119	1358
9	STUDENTS	42	109	1476
10	COMPLEXITY	23	97	776

Table 10 lists the top ten keywords based on the overall global citation scores. It exhibits citations gathered from other WoS articles by papers containing certain keywords. In addition, it defines how much credit the WoS article writers give the researches with the keywords. Writing(66.6 percent), language (20.0 percent), and second (12.7 percent) held the first, second, and fourth ranks based on the TGCS, reinforcing the concept that the

L2 Writing Journal is a specialized L2 Writing journal Feedback is another prominent theme in terms of its TGCS. In addition, data from this table can be compared with the data in Table 9, where nine out of the ten keywords were the same for both tables. EFL was the only keyword Table 9 did not include.

Table 10
Top Ten Keywords by Total Global Citation Score

#	Keywords	Recs	TLCS	TGCS
1	WRITING	448	799	10057
2	LANGUAGE	221	311	3019
3	FEEDBACK	38	163	2283
4	SECOND	179	204	1914
5	STUDENT	35	133	1673
6	STUDENTS	42	109	1476
7	WRITERS	58	119	1358
8	WRITTEN	31	135	1353
9	GENRE	32	119	1285
10	EFL	30	62	1120

Table 11
The Type of Research Document

Document Types	Recs	TLCS	TGCS
Article	344	1091	13336
Book Review	115	4	26
Editorial Material	92	117	738
Bibliography	74	0	11
Article; Proceedings Paper	13	34	599
Review	10	46	392
Correction	6	0	0
Biographical-Item	2	0	0

Document Types

Table 11 lists the categories of papers in the L2 Writing Journal. As indicated by the table, there were eight types of documents in the publication: articles (52.4 percent), book reviews (17.5 percent), editorial materials (14.0 percent), bibliographies (11.3 percent),

proceedings papers (2.0 percent), book reviews (1.5 percent), corrections (0.9 percent), and bibliographical-items (0.3 percent), also called obituaries. Articles were the most common type of document in the journal, acounting for 52.4 percent of all records.

It should be mentioned that the kind of docment proceedings paper was added to the WoS database to produce materials that were first given at a conference or workshop and subsequently converted for publication in a journal (González-Albo & Bordons, 2011).

Table 12

Top Fifteen Authors by Publication Records

#	Authors	Recs	TLCS	TGCS
1	Silva T	77	5	20
2	Wang ZZ	18	0	7
3	Cimasko T	17	6	39
4	Paiz JM	15	0	4
5	Matsuda PK	13	12	170
6	Yang K	13	0	6
7	Hyland K	11	74	1094
8	Lee I	10	38	505
9	Li YY	10	22	328
10	Lucas K	9	0	1
11	McMartin-Miller C	9	0	0
12	Atkinson D	8	18	135
13	Bitchener J	8	62	755
14	Kapper JL	8	0	0
15	Polio C	8	21	192

Authors

Table 12 illustrates the top fifteen authors in terms of publication records. Silva was the most prolific researcher in the L2 Writing Journal, followed by Wang, Cimasko, Paiz, Matsuda, and Yang. Matsuda and Yang ranked fifth and produced 13 papers each.

Table 13 presents the top ten authors of the journal based on their total local citation score. Hyland was the most influential in the journal's collection, followed by Bitchener and Storch. Kormos and Lee retained the same rating because they had the same TLCS.

Table 13

Top Ten Authors by Total Local Citation Score

#	Authors	Recs	TLCS	TGCS
1	Hyland K	11	74	1094
2	Bitchener J	8	62	755
3	Storch N	8	44	608
4	Truscott J	4	43	517
5	Kormos J	4	38	255
6	Lee I	10	38	505
7	Chandler J	3	36	402
8	Kubota R	6	31	172
9	Pecorari D	3	29	317
10	Ferris DR	2	28	313

Table 14

Top Ten Authors by Total Global Citation Score

#	Authors	Recs	TLCS	TGCS
1	Hyland K	11	74	1094
2	Bitchener J	8	62	755
3	Storch N	8	44	608
4	Truscott J	4	43	517
5	Lee I	10	38	505
6	Chandler J	3	36	402
7	Baker W	2	10	388
8	Li YY	10	22	328
9	Pecorari D	3	29	317
10	Ferris DR	2	28	313

Table 14 illustrates the top 10 writers in the journal based on their total global citation ratings. As mentioned in the table, Hyland had the largest amount of citations to his studies in the Web of Science Core Collection, followed by Bitchener, Storch, and Truscott. They were the most influential writers in the publication since their TLCS and TGCS were higher than everyone else's. Interestingly, despite their publication record numbers were not the greatest, their themes were fascinating enough to draw other researchers' attention.

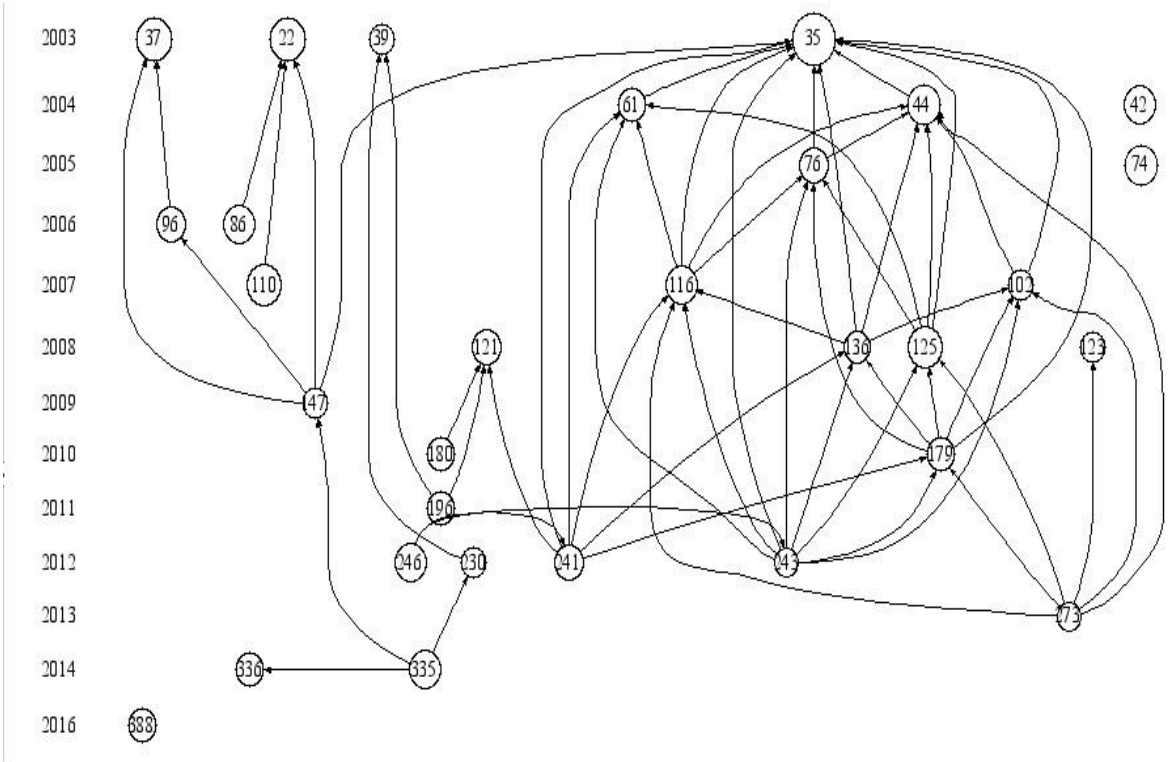
HistCite Citation Mapping

Figure 1 displays the co-citation networks among the 656 papers from 2002 to 2021. The HistCite graph marker revealed 30 articles as nodes and 59 combinations of nodes as links based on TLCS. Note that the larger the node, the greater its influence (Wu, 2018). Furthermore, Shah et al. (2020) stated that an arrowhead between two nodes illustrates the citation connectivity between two articles. The vertical scale in the co-citation networks indicates the year of publication, and each node with a particular number identifies each article.

As demonstrated by Figure 1 with 19 nodes, the first half of the time axis from 2003 to 2009 was a productive age during which 63.3 percent of the 30 articles were produced. A detailed inspection of the figure suggests that 2003, 2008, and 2012 were fruitful, as four highly cited papers emerged in each of the three years.

Figure 1

Citation Mapping of the Most Influential Authors in the L2 Writing Journal



Nodes: 30, Links: 59
LCS, top 30; Min: 10, Max: 31 (LCS scaled)

		LCS	GCS
1.	22 Hyland K, 2003, J SECOND LANG WRIT, V12, P17	22	256
2.	35 Chandler J, 2003, J SECOND LANG WRIT, V12, P267	31	363
3.	37 Pecorari D, 2003, J SECOND LANG WRIT, V12, P317	21	234
4.	39 Jarvis S, 2003, J SECOND LANG WRIT, V12, P377	11	79
5.	42 Kubota R, 2004, J SECOND LANG WRIT, V13, P7	17	106
6.	44 Ferris DR, 2004, J SECOND LANG WRIT, V13, P49	18	223
7.	61 Truscott J, 2004, J SECOND LANG WRIT, V13, P337	13	124
8.	74 Storch N, 2005, J SECOND LANG WRIT, V14, P153	19	358
9.	76 Bitchener J, 2005, J SECOND LANG WRIT, V14, P191	14	236
10.	86 Tardy CM, 2006, J SECOND LANG WRIT, V15, P79	17	84
11.	96 Keck C, 2006, J SECOND LANG WRIT, V15, P261	15	119
12.	102 Guenette D, 2007, J SECOND LANG WRIT, V16, P40	11	129
13.	110 Hyland K, 2007, J SECOND LANG WRIT, V16, P148	20	321
14.	116 Truscott J, 2007, J SECOND LANG WRIT, V16, P255	16	215
15.	121 Kuiken F, 2008, J SECOND LANG WRIT, V17, P48	15	96
16.	123 Lee I, 2008, J SECOND LANG WRIT, V17, P69	11	128
17.	125 Bitchener J, 2008, J SECOND LANG WRIT, V17, P102	20	262
18.	136 Truscott J, 2008, J SECOND LANG WRIT, V17, P292	12	153
19.	147 Storch N, 2009, J SECOND LANG WRIT, V18, P103	11	72
20.	179 Bitchener J, 2010, J SECOND LANG WRIT, V19, P207	13	145
21.	180 Ong J, 2010, J SECOND LANG WRIT, V19, P218	13	95
22.	196 Kormos J, 2011, J SECOND LANG WRIT, V20, P148	13	97
23.	230 Verspoor M, 2012, J SECOND LANG WRIT, V21, P239	11	91
24.	241 Williams J, 2012, J SECOND LANG WRIT, V21, P321	14	121
25.	243 Bitchener J, 2012, J SECOND LANG WRIT, V21, P348	10	70
26.	246 Kormos J, 2012, J SECOND LANG WRIT, V21, P390	16	109
27.	273 Ferris DR, 2013, J SECOND LANG WRIT, V22, P307	10	90
28.	335 Bulte B, 2014, J SECOND LANG WRIT, V26, P42	17	99
29.	336 Crossley SA, 2014, J SECOND LANG WRIT, V26, P66	13	66
30.	388 Hyland K, 2016, J SECOND LANG WRIT, V31, P58	13	143

The 59 linkages may be further divided into five clusters that each contained more than one link. Article 22, 35, 37, 39, 121 led the clusters. Article 35, created by Chandler (2003), led to the greatest cluster on the map. This article was based on experimental research which explored the impact of several forms of corrective feedback on L2 learners' writing. As illustrated by Tables 12, 13, and 14, Chandler may not be the most prominent author in the journal, but her 2003 work on error correction and feedback spearheaded a larger cluster of highly cited papers. The outcome is instructive since the study issue of error correction and feedback may be more prevalent than we thought. More importantly, four of the clusters started in 2003, indicating that important research issues surfaced in the year and took root in the following studies. Interestingly, although Hyland was the most influential author based on his TLCS and TGCS, he merely generated three links on the map.

Keeping track of sources is essential because academics must be able to trace the ancestry of concepts (Hunter, 2006). The table below depicts the five clusters identified based on the citation map. As seen in Table 15, Cluster 2, which is headed by Article 35, has 50 links, the most of the five clusters. In contrast to the 59 ties detected by the HistCite graph marker, the researcher discovered 61 linkages using the citation map. The bibliometric software may ignore some node combinations as links.

Table 15

Links to the Citation Networks

#	Node Combination	Starting Year
	Cluster 1	
1	Article #22-86	2003
2	Article #22-110	2003
3	Article #22-147-335	2003
	Cluster 2	
4	Article #35-44-76-116-136-179-243	2003

5	Article #35-44-76-116-136-179-273	2003
6	Article #35-44-76-116-136-241-246	2003
7	Article #35-44-76-116-241-246	2003
8	Article #35-44-76-116-243	2003
9	Article #35-44-76-243	2003
10	Article #35-44-102-136-179-243	2003
11	Article #35-44-102-136-241-246	2003
12	Article #35-44-102-179-243	2003
13	Article #35-44-116-136-179-243	2003
14	Article #35-44-116-136-179-273	2003
15	Article #35-44-116-136-241-246	2003
16	Article #35-44-116-241-246	2003
17	Article #35-44-116-243	2003
18	Article #35-44-125-179-243	2003
19	Article #35-44-125-179-273	2003
20	Article #35-44-125-243	2003
21	Article #35-44-125-273	2003
22	Article #35-44-136-179-243	2003
23	Article #35-44-136-179-273	2003
24	Article #35-44-136-241-246	2003
25	Article #35-44-136-243	2003
26	Article #35-44-273	2003
27	Article #35-61-116-136-179-241-246	2003
28	Article #35-61-116-136-179-243	2003
29	Article #35-61-116-136-179-273	2003
30	Article #35-61-116-136-241-246	2003
31	Article #35-61-116-136-243	2003
32	Article #35-61-116-241-246	2003
33	Article #35-61-116-243	2003
34	Article #35-61-125-179-243	2003
35	Article #35-61-125-179-273	2003
36	Article #35-61-125-179-241-246	2003
37	Article #35-61-125-243	2003
38	Article #35-61-125-273	2003
39	Article #35-61-241	2003
40	Article #35-61-243	2003
41	Article #35-76-116-136-179-243	2003

42	Article #35-76-116-136-179-273	2003
43	Article #35-76-116-136-241-246	2003
44	Article #35-76-116-136-243	2003
45	Article #35-76-116-241-246	2003
46	Article #35-76-116-243	2003
47	Article #35-76--125-179-243	2003
48	Article #35-76-125-179-273	2003
49	Article #35-76-125-243	2003
50	Article #35-76-179-243	2003
51	Article #35-76-179-273	2003
52	Article #35-147-335	2003
53	Article #35-241	2003
	Cluster 3	
54	Article #37-96-147-335	2003
55	Article #37-147-335	2003
	Cluster 4	
56	Article #39-196	2003
57	Article #39-230-335	2003
	Cluster 5	
58	Article #121-180	2008
59	Article #121-196	2008
60	Article #121-241-246	2008

Discussion

Employing the tool HistCite Pro, this study conducted a bibliometric analysis of 656 papers published in the L2 Writing Journal from 2002 to June 2021, obtained from WoS. The primary findings of the bibliometric study are as follows. The publishing year 2019 has the largest number of publication records, followed by 2017 and 2013. Year 2012 ranked first for the total local citation ratings. The years 2003 and 2004 placed second and third separately. Year 2003 scored highest in terms of the total global citation ratings, followed by 2004 and 2007. Additionally, the United States, People's Republic of China, and United Kingdom were the top three nations for publication records, and overall local and global citation ratings.

The evaluation of the data indicated the rankings of the institutions based on the publication number, TLCS, and TGCS. To begin with, Purdue University placed top with 92 publication records, followed by Georgia State University, the University of

Hong Kong, and Arizona State University. Eight out of the top 15 institutions for publishing records were in the United States. Next, Georgia State University, with a total citation score of 81, was ranked first, followed by the University of Melbourne, the California State University at Sacramento, the City University of Hong Kong, and the National Tsing Hua University. Even more, with a total global score of 757, the University of Melbourne was ranked the highest, followed by Georgia State University, the University of London, the City University of Hong Kong, and the University of Hong Kong.

The five most often used terms were writing, language, second, scholarship, and bibliography. We can observe that the journal stimulated significant and extensive investigations into second-language writing. As suggested by the total and local citation scores, the journal was a specialized journal of second language writing. Furthermore, feedback was an important theme in this publication in terms of its TLC and TGCS.

There were eight types of documents in the publication: articles (52.4 %), book reviews (17.5 %), editorial materials (14.0 %), bibliographies (11.3 %), proceedings papers (2.0%), book reviews (1.5 %), corrections (0.9 %), and bibliographical-items (0.3 %), also called obituaries. Articles were the most prevalent sort of document in the journal, accounting for 52.4 % of all entries.

The study also found that Silva was the most productive researcher in the L2 Writing Journal, followed by Wang, Cimasko, Paiz, Matsuda, and Yang. Hyland was the most influential in the journal's collection in terms of his TLCS, followed by Bitchener, Storch, and Truscott. Besides, Hyland got the most citations for his research in the Web of Science Core Collection, followed by Bitchener, Storch, and Truscott. The four authors were the most influential in the publication, as their TLCS and TGCS were higher than everyone else's. And yet, evaluating the co-citation mapping graph with the aid of HistCite Pro, I discovered that Chandler may not be the most dominant author in the journal, but her 2003 paper on error correction and feedback influenced the biggest cluster on the map.

The subject of error correction and feedback may be more prominent than we imagined. One paper published in 2003 generated the biggest cluster in the citation networks. Four out of the five clusters on the citation map began in 2003, suggesting that key research concerns arose in the year and took root in future studies.

Using the bibliometric analysis tool AntConc, Arik and Arik (2017) collected data from papers on L2 writing covered in SSCI and A & HCI of WoS between 1900 and 2013, and

between 1975 and 2013. Even though their and my studies employed different bibliometric tools and data sources, the results in authors, countries, institutions, document types, and keywords are comparable. The comparison of the two research using various bibliometric approaches may enable us to determine whether the study's conclusions are clear and consistent. To begin with, both studies identified Silva and Cimasko as two of the three most productive researchers. In addition, both investigations classified the United States and China as two of the top three nations based on their publication records. What is more, Arik and Arik's research and this one selected Purdue University and Georgia State University as the top universities based on their publication numbers.

Likewise, articles, book reviews, editorial materials, and bibliographies were the most common kinds of documents in both studies. Arik and Arik (2017) compiled a list of the ten most frequent terms as follows: writing, language, second, bibliography, scholarship, recent, selected, research, English, and instruction. Apart from "instruction," nine of these words were in the top ten in my study. In spite of the differences in bibliometric tools and data sources, Arik and Arik's research and mine may have found comparable results.

Conclusion

Some of the similarities between my study and that of Arik and Arik (2017) may be attributable to the prestigious position of the L2 Writing Journal. According to Iso-Ahola (2009), the political purpose of a flagship journal is to legitimize the investigation of a subject area and boost a field's standing in the greater academic community. Thus, not only does it publish the most recent theoretical and empirical research, but it also functions as a change agent, being proactive and directing research. As a result, the presence of a prominent publishing nation, institution, or author in the journal may have a similar effect in other WoS journals. By the same token, the typical formats of papers in this flagship journal may have formed a benchmark for scholars of L2 writing who publish in other WoS journals. In the same way, the researchers of the other WoS publications who study L2 writing may use the journal's most common words.

Hairston (1982) observed that the movement of a process-oriented theory of teaching writing was probably in the early stages of a paradigm shift based on his interpretation of Kuhn's book (1970). Lei (2015) investigated whether the writing process paradigm had

lost its pedagogical hegemony and whether a paradigm change had ushered in the post-process age. Following the methodology outlined in Hairston's research, this report found that a paradigm shift promising to usher in a "post-process" period was in its infancy. However, both studies were argumentative academic articles devoid of statistical data. Bibliometric techniques could help explain the key trends in a vast body of work in a way that would be difficult to do normally (Meara, 2014). Thus, to determine whether the field of second language writing has experienced systemic changes, researchers might do bibliometric analysis on data gathered over many decades. Only HistCite Pro was used to analyze data for this investigation. Future research may include a second biliometric equipment, such as the VOSviewer, to confirm the accuracy and consistency of data. In addition, it is recommended to do such a bibliometric study in combination with a content analysis to gain more depth in L2 writing research in databases other than WoS (Kölemen, 2021).

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