Mapping Knowledge Domains in Second Language Writing Research: A Citation Network Analysis*

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ABSTRACT

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This study conducted citation network analysis to illuminate knowledge domains in second language (L2) writing research, as reflected in literature citation patterns. The data comprised 2,316 research articles during the period 1990-2021. CitNetExplorer software was employed to calculate citation interconnectivity and visualize the citation network. Cluster analysis of the citation network identified 14 research topics and 25 subtopics. The results indicated that the most frequently researched topics included feedback, linguistic features as a predictor of L2 writing proficiency, collaboration, individual differences in writing behavior, and voice construction and metadiscourse. The least frequently researched topics reflected research interests that are emerging or underrepresented in L2 writing research. Topics such as multimodal composing and machine translation demonstrated growing research interest in multimodality and new digital literacies. The results also raised the question of whether L2 writing research lacked focus on young learners, real-life writing tasks, and L2 writing concerns in specific cultural contexts. Limitations and suggestions for further research are discussed.

KEYWORDS

second language writing, citation network analysis, mapping knowledge domains, CitNetExplorer

1. Introduction

The mapping of knowledge domains is a method used to understand the knowledge structure, dynamics, and paradigm development in a discipline or a research field (Boyack 2004). Understanding the knowledge structure of a given academic field allows researchers to organize the research areas that constitute the field, locate core publications relevant to their research interests, and further envision the future direction of the field. Given the increasingly large volume of literature in second language (L2) writing, now largely digitized, it is valuable to map knowledge domains in this research field. By mapping knowledge domains in L2 writing research, we can articulate what research topics have constituted L2 writing research and how the topics have developed in connection with one another. Citation network analysis is a quantitative method to map knowledge structures using citation relations among publications, and is a major technique used for mapping knowledge domains (Boyack 2004, Jo and Park 2012, Rosvall and Bergstrom 2010). Citation practices are an enactment of power in academia and integral to the construction of disciplinary knowledge, particularly in humanities and social sciences. Researchers use citations to define the specific contexts of knowledge or problem to which their current work aims to contribute (Hyland 1999). Thus, an investigation of citation patterns of disciplinary literature can reveal what knowledge has been selected and perpetuated over time in the field.

There have been efforts to elucidate the major issues and the relevant findings in L2 writing research (e.g., Pelaez-Morales 2017, Riazi et al. 2018, White 2019, Yu and Lee 2016, Zheng and Yu 2019). Many syntheses and reviews of L2 writing publications have provided useful information on work done to date and suggested future directions. However, the existing review studies have limitations in mapping knowledge domains for L2 writing research, given the scope of analysis and the method used. Most of them have adopted a narrower scope that focuses on a specific topic such as feedback (Yu and Lee, 2016), assessment (Zheng and Yu 2019, White 2019), or a specific journal's publications (Pelaez Morales 2017, Riazi et al. 2018). Only a couple of studies have examined the full scope of 'L2 writing literature' (Arik and Arik 2017, Jun 2008), and these are insufficient to give a complete picture of the field's knowledge structure. Methodologically, most of the review studies employed content analysis, which heavily relies on researchers' judgment in deciding the topics, methods, and contexts of research, as well as the relationships among the publications (Parent et al. 2021). Thus, the knowledge domains identified in the content analysis studies were subjected to the inevitable subjectivities of how the researchers conceptualized the core research themes and categorized them. Although Arik and Arik (2017) attempted to do a bibliometric analysis, they only quantified L2 writing publications according to several bibliometric indicators (e.g., publication years, areas of research, journals, authors, and their affiliations) and did not examine the structure and evolution of research topics in L2 writing research.

To complement and advance the existing reviews, the present study conducts a citation network analysis of L2 writing literature to illuminate knowledge domains in the field. Unlike traditional content analysis where coding and classification are at the researcher's discretion, network analysis calculates the citation patterns shown in the literature and visually represents how the literatures are interrelated with one another (Jo and Park 2012, Parent et al. 2021). By conducting a citation network analysis of a comprehensive range of L2 writing literature, the present study aims to illuminate major topic areas, subtopics, and their interrelationships.

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2. Prior Reviews and Syntheses

To date, while several studies have reviewed scholarly works in L2 writing, only a few have analyzed a comprehensive range of L2 writing literature. Among the early comprehensive reviews of L2 writing literature, Jun (2008) organized 50 years of L2 writing publications into five topic domains, summarizing the major issues and the relevant findings in each domain. The five topic domains comprised L2 writer characteristics, writing process, feedback, writing instruction, and L2 writers' texts. Jun additionally suggested four topic domains that need further research: (a) writing in languages other than English, (b) early L2 writing development (for example, high school students' writing), (c) writing instruction, and (d) corpus-based text analysis.

Nguyen (2019) and Geng et al. (2022) also conducted reviews of a comprehensive range of L2 literature, with a focus on EFL writing. Nguyen (2019) analyzed L2 writing literature in relation to teaching EFL writing in an Asian context and organized the knowledge into three domains. The first domain pertained to the investigation on distinctions between L1 and L2 writing with three research foci: text-related, writer-related, and context-related aspects. The second domain concerned the development of L2 writing teaching approaches: text-oriented, writer-oriented, and reader-oriented. The third domain pertained to the impact of L2 writing teaching approaches, particularly process-based instruction. Geng et al. (2022) examined 136 empirical studies on EFL writing in primary and secondary school contexts from 2012 to 2019. The results showed that the most typical participants were secondary school students, with limited research on primary school students. Eight research foci were identified: writing instruction (28.8%), writing quality (17.6%), feedback (14.1%), composing process (11.8%), individual differences in writing (9.4%), assessment (9.4%), writing teacher development (6.5%), and materials for teaching (2.4%). The most dominant research foci were writing instruction and students' writing quality while two largely neglected research foci were writing teacher development and materials for teaching.

Unlike those studies which employed a content analysis, Arik and Arik (2017) utilized a bibliometric analysis. Instead of identification and classification of the topics of research articles, they arranged L2 writing publications according to their bibliometric indicators, such as publication years, areas of research, journals, authors and their affiliations and countries, document types, etc. The data set comprised 266 publications, covered in the Social Sciences Citation Index (SSCI) and Arts and Humanities Citation Index (A and HCI), including articles, book reviews, bibliographies, editorial materials, and others. The publication years were between 1900 and 2013. Results showed that the first L2 writing publication appeared in 1992, and the number of publications showed a steady increase over the years. L2 writing research from universities in the U.S. and Canada accounted for the majority of publications, and 92% of the publications were in the area of linguistics, while the rest belonged to the areas of education, communication, and psychology.

Review studies of the publications in *Journal of Second Language Writing* (*JSLW*) also deserve discussion given that *JSLW* is a leading journal in the field and has published a comprehensive range of topics in L2 writing. Pelaez-Morales (2017) examined 336 empirical articles published between 1992 and 2015 in *JSLW*. The researcher coded the topics, or "what the article was primarily about (p.10)" in the articles, in addition to other descriptive information. The results showed that over 51% of the empirical articles were represented by eight topic domains: feedback, genre, writing process, assessment, use of sources, academic writing, revision, and writing for publication. Across these domains, the most frequently investigated subtopics were error correction, the importance of genre for L2 writing, cognitive process, placement, plagiarism, and challenges in academic writing and writing for publication. The less frequently researched topics, representing 31% of the data, encompassed linguistic accuracy, fluency, and complexity, ideology, sociopolitical/sociocultural issues, writing instruction abroad, and transfer. The topics with each having fewer than five studies during the 23-year period were the role

of personal factors on writing performance (e.g., anxiety, motivation), and identity (e.g., the role of gender in L2 writing). In addition, Riazi et al. (2018) examined 272 empirical research articles published between 1992 and 2016 in *JSLW*. Their analyses identified 20 topic domains. The top ten topic domains, accounting for 76.1% of the entire data set, comprised feedback, instruction, language and literacy development, assessment, composing processes, L1 versus L2, source-based writing, L1 and L2 (e.g., transfer, L1 involvement), L2 writing quality, and professional development. Based on the results, the researchers suggested that future research needs to target more diverse contexts and participants (e.g., writing in languages other than English, young learners' L2 writing development).

In closing, the prior reviews provide different depictions of the classification of topic domains in L2 writing research, which is likely inevitable as the topics and their relationships are judged by human coders. The differences in topic classification have made it difficult to compare study results in terms of research progress in each topic area and interconnectedness among the topic areas. Although limited, there are common results shown by previous studies based on similar topic counts. The most frequently researched topics, commonly identified by the prior reviews, were feedback, writing process, and writing instruction. The studies also displayed a consensus on the need to accommodate the diversity of instructional contexts and student populations in future research. Citation network analysis could complement and further advance these prior studies. By mapping articles based on citation relations, instead of relying on human raters, it would allow access to core conceptual and methodological bases for each group based on shared citations.

3. Citation Network Analysis

Citation network analysis is a branch of social network analysis (Marion et al. 2003). Whereas social network analysis examines patterns of interaction or connections between people, groups, and organizations, citation network analysis is used to examine connections among publications (Parent et al. 2021). The first study to use citation network analysis was Garfield et al.'s (1964) research on the history of DNA, in which they reconstructed the intellectual history of DNA research using citation data. Since then, this method has been used in diverse fields, including educational technology (Cho and Park 2012), counseling psychology (Parent et al. 2021), biology (Rosvall and Bergstrom 2010), and information management (Lee 2017). Citation network analysis is an effective method to explore the relational patterns and network attributes in publications by using citation links as the data (Cho and Park 2012, Marion et al. 2003). Unlike content analysis, in which publications are coded and organized into topic domains based on how the researchers assessed the key characteristics of the publications, citation network analysis examines the network of direct citations, co-citations, and bibliographic coupling relations among publications. Based on the closeness of citation relationship, the publications can be grouped into clusters, which organically reflect knowledge domains in a specific research area or discipline. Furthermore, clusters and their positions in the network could illustrate how a particular research area has evolved over time in the field (Rosvall and Bergstrom 2010). One can examine the historical development of a research area by comparing the analyses of the co-citation and bibliographic coupling networks over different time periods. In addition, recent software such as CitNetExplorer (van Eck and Waltman,2014) can display the most important publications in the area in chronological order, along with their citation relations, which gives a picture of the research area's evolution over time (van Eck and Waltman 2014).

4. Present Study

The present study conducted a citation network analysis to map knowledge domains in L2 writing research. Mapping the terrain of L2 writing research articles in the form of a network can visually represent different groupings of articles as well as their interconnectedness. The research questions are as follows:

Question 1: What topic areas constitute L2 writing research, emerging from the citation network?
Question 2: What does the citation network reveal about the development of L2 writing research, including areas of scholarly effort being concentrated, under-researched areas, and newly emerging areas?

5. Method

The data used in the present study were L2 writing research articles indexed in the Web of Science (WoS) database. The WoS Core Collection covers over 21,100 peer-reviewed leading journals worldwide and provides access to citation information. CitNetExplorer analysis software (van Eck and Waltman 2014) was employed to visualize and analyze the citation network of L2 writing research articles. This software was chosen because its clustering technique seemed appropriate for the purpose of the study. CitNetExplorer, a relatively new software tool, has the capacity to cluster a large volume of articles based on citation relations and visualizes the results. It also provides clustering solutions at various sub-levels. For example, one or more clusters can be selected from the full citation network, and the articles belonging to the selected clusters can be analyzed at the subnetwork level. In addition, CitNetExplorer can import data directly from the WoS database to construct citation networks (van Eck and Waltman 2014, 2017).

To collect L2 writing research articles, the WoS topic search was run with the terms of ["second language" or "ESL" or "EFL" or "L2"] AND ["writing" or "writer" or "writers"]. The publication period was set from 1990 to 2021, the maximum searchable period available. The initial search yielded 4,632 publications. Given that the study purpose was to analyze the topic areas in L2 writing research, the scope of data was narrowed to original research articles and review articles, excluding other types of documents such as editorial materials, bibliographies, meeting abstracts, etc. The resulting 3,182 articles were then manually perused to check that the titles, abstracts, and keywords of the articles included "second language writing" or the relevant combined terms (e.g., EFL writer). Even when the articles did not contain the exact combined terms, the articles which dealt with known L2 writing research topics (e.g., corrective feedback, contrastive rhetoric) or were published in one of the journals addressing L2 writing (e.g., *Journal of Second Language Writing*, *Assessing Writing*, *Writing Research*) were also included. The selection was made carefully not to exclude any relevant articles. The final data comprised 2,316 articles, including 17 articles published online prior to their inclusion in a journal issue to be published in 2022. Out of the final data, 2,297 articles (99.18%) were published during the recent decade from 2012 to 2021/2[1]. Only 19 articles were dated before 2012, probably due to the WoS database's incomplete coverage of earlier L2 writing publications. Given that the data comprised a small fraction of earlier publications, the present study was not allowed to examine the chronological development of topic areas of L2 writing research.

The final data were input into CitNetExplorer. The citation network analysis of 2,316 articles yielded 6,927

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[1] The publication year of 2021/2 was used because it included the articles published online in 2021, prior to their journal publication in 2022.

citation links. Each link indicates the presence of a citation between connected articles. Cluster analysis was performed to examine how the articles were grouped based on their citation patterns. Clustering articles means grouping articles in the way that articles with strong citation relationships are assigned to the same cluster. Thus, a cluster could be interpreted to represent a specific topic area in the scholarly literature (van Eck and Waltman 2014, 2017).

In clustering, resolution is an important parameter which affects the numbers and sizes of clusters. A higher resolution level yields more clusters, each comprising fewer articles. In contrast, a lower resolution level produces fewer clusters, each comprising more articles. CitNetExplorer allows resolution to be set to any value between 0.00-2.00. To determine the optimal level of resolution, the author tested different levels of resolution, carefully examining the number of clusters and their interpretability for each level (Parent et al. 2021, van Eck and Waltman 2014, 2017). As a result, the cluster solution at the level of 1.50 was judged to be the best balance between the number of interpretable clusters and minimizing the overdominance of one cluster. At the selective resolution level of 1.50, cluster analysis yielded 14 clusters with 1,813 articles, accounting for 78.28% of the data. The remaining 503 articles were found to have no citation link in the network. Each of the 14 clusters was further subjected to cluster analysis to find the presence of meaningful subgroups. Different levels of resolution were tested for each cluster to find the optimal level to produce the best interpretable subcluster model. This resulted in 25 subclusters for the 14 clusters.

6. Result

6.1 Geometric Map of Topic Domains in L2 Writing Research

The citation network of 1,813 articles is presented in Figure 1. The nodes indicate articles and links indicate the presence of a citation between the connected articles. The vertical axis represents the year of publication, and the horizontal axis represents the degree of relatedness in citation patterns. Articles that are closer to each other in the citation network are positioned closer to each other on the horizontal plane. The colors of nodes indicate cluster memberships. In Figure 1, the clusters were formed below the year of 2012 to the present time on the vertical plane because the current data mainly comprised the articles published during the recent decade (2012-2021/2). The clusters closer to one another on the horizontal plane share more citations, suggesting more conceptual and empirical relatedness (van Eck and Waltman 2014, 2017).
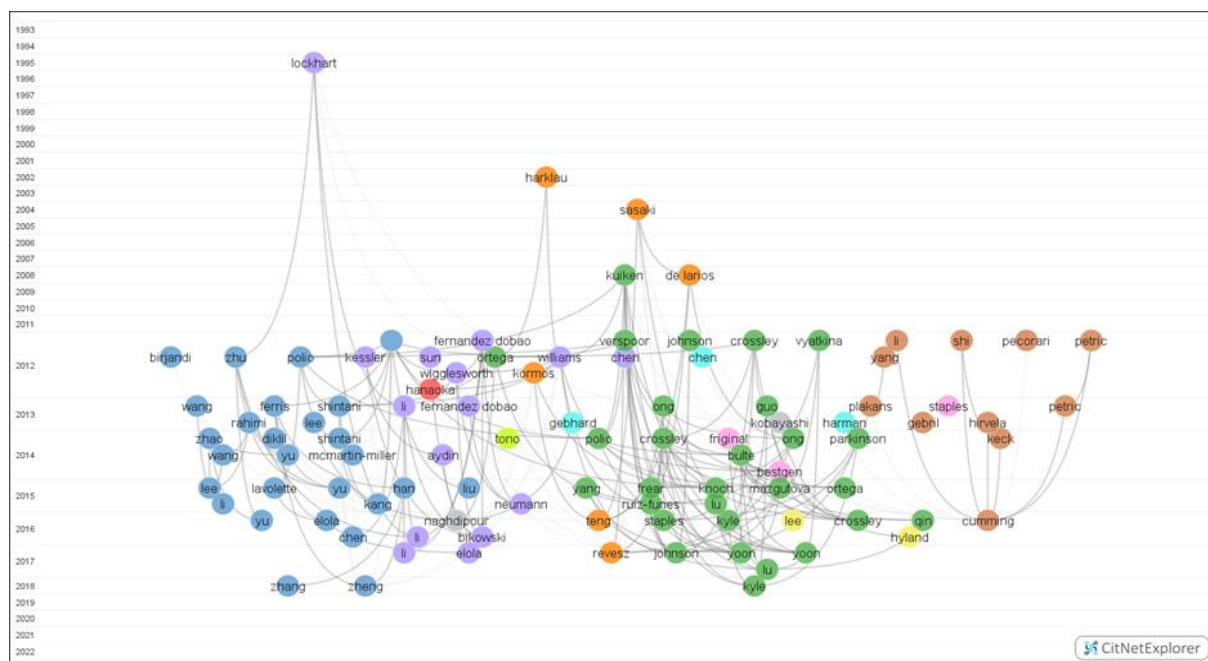
Figure 1. The Citation Network of the L2 Writing Articles

Note. The visualization of the citation network is presented based on the 100 articles with the highest citation scores. The colors of the nodes indicate cluster memberships.

Based on the proximities among the clusters in the citation network, the 14 clusters were grouped into three distinct groups. Each group was named to reflect the core themes of the clusters belonging to the group. Thus, each of the three groups of clusters represented a different topic domain of L2 writing research. The first and largest group, located on the left side of the full network, reflected *teaching L2 writing as a process*, comprising clusters 1 (*feedback*), 3 (*collaboration*), 9 (*self-correction*), and 10 (*instructional strategies*). The next prominent group, located on the right side of the network, represented *corpus-informed text/discourse analysis studies,* and comprised clusters 2 (*linguistic predictors of L2 writing proficiency and task complexity*), 5 (*voice construction and metadiscourse*), 6 (*source-based writing*), 7 (*formulaic sequences in L2 texts*), and 11 (*language use in different writer groups*). Geographically located between these two large groups was the third group on *interplays between learner and context,* and comprised clusters 4 (*learner differences*), 8 (*genre-based approach*), 12 (*L2 writers' longitudinal development*), 13 (*teacher beliefs and classroom practices*), and 14 (*local contextual issues*). The three groups accounted for 40.21%, 37.01%, and 22.78% of the network, respectively. Figure 2 presents the three groups of the 14 clusters.
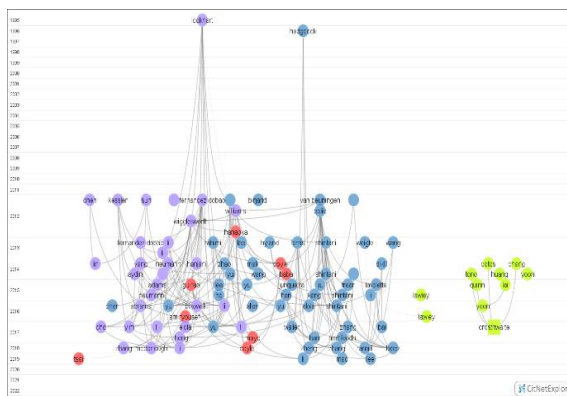
Group 1. cluster 1=blue, cluster 3=purple,
cluster 9=light green, cluster 10=red
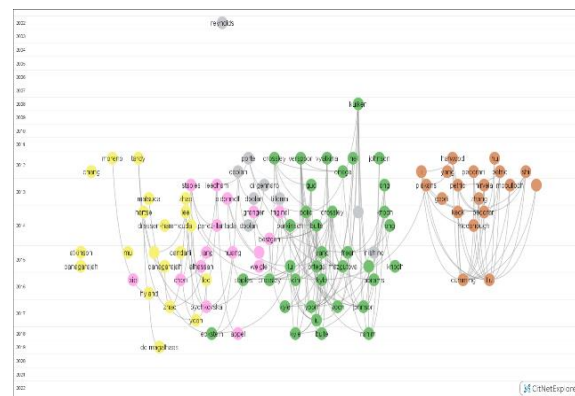
Group 2. cluster 2=green, cluster 5=yellow, cluster
6=brown, cluster 7=pink, cluster 11=gray
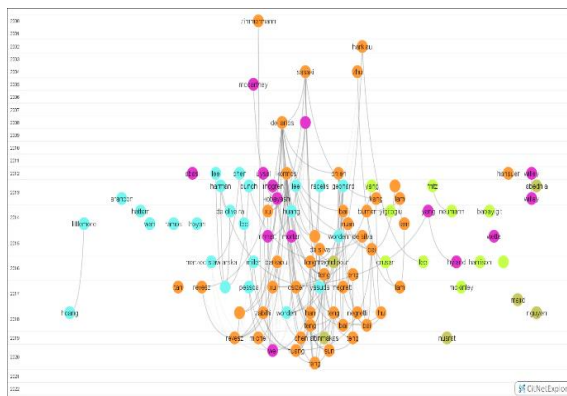
Group 3. cluster 4=orange, cluster 8=light blue,
cluster 12=dark pink, cluster 13=light green,
cluster 14=mustard

Figure 2. Three Groups of the 14 Clusters

6.2 Teaching L2 Writing as a Process

The first group of the clusters focused on *teaching L2 writing as a process* such as *feedback, collaboration, self-correction, and instructional strategies*. This group accounted for 40.21% of the current network and was dominated by clusters 1 (blue) and 3 (purple). Clusters 9 and 10 were relatively small and had low citation influence. Table 1 presents each cluster's (and subcluster's) articles with the highest citation counts in the network, which allows inference of the core theme of the cluster.

Table 1. Teaching L2 Writing as a Process[2]

Cluster	Article	Citation score	Title
Cluster 1			
1A	Van Beuningen et al. (2012)	69	Evidence on the effectiveness of comprehensive error correction in second language writing
	Ferris et al. (2013)	55	Written corrective feedback for individual L2 writers
	Shintani and Ellis (2013)	44	The comparative effect of direct written corrective feedback and metalinguistic explanation on learners' explicit and implicit knowledge
	Kang and Han (2015)	43	The efficacy of written corrective feedback in improving L2 written accuracy: a meta-analysis
	Shintani et al. (2014)	42	Effects of written feedback and revision on learners' accuracy in using two English grammatical structures
1B	Yu and Lee (2016)	28	Peer feedback in second language writing (2005-2014)
	Rahimi (2013)	26	Is training student reviewers worth its while? A study of how training influences the quality of students' feedback …
	Yu and Lee (2015)	25	Understanding EFL students' participation in group peer feedback of L2 writing: A case study from an activity theory perspective
	Zhu and Mitchell (2012)	22	Participation in peer response as activity: An examination of peer response stances from an activity theory perspective
	Wang (2014)	22	Students' perceptions of rubric-referenced peer feedback on EFL writing: A longitudinal inquiry
1C	Zhang and Hyland (2018)	29	Student engagement with teacher and automated feedback on L2 writing
	Li et al. (2015)	26	Rethinking the role of automated writing evaluation (AWE) feedback in ESL writing instruction
	Wang et al. (2013)	22	Exploring the impact of using automated writing evaluation in English as foreign language university students' writing
	Dikli and Bleyle (2014)	21	Automated essay scoring feedback for second language writers: How does it compare to instructor feedback?
	Zhang (2017)	16	Student engagement with computer-generated feedback: A case study
1D	Lee and Coniam (2013)	24	Introducing assessment for learning EFL writing in an assessment of learning examination-driven system …
	Mak and Lee (2014)	13	Implementing assessment for learning in L2 writing: An activity theory perspective
	Lam (2013)	9	The relationship between assessment types and text revision
	Lee (2016)	8	Putting students at the center of classroom L2 writing assessment
	Ene and Kosobucki (2016)	7	Rubrics and corrective feedback in ESL writing: A longitudinal case study of an L2 writer
Cluster 3			
3A	Dobao (2012)	70	Collaborative writing tasks in the L2 classroom: Comparing group, pair, and individual work
	Wigglesworth and Storch (2012)	44	What role for collaboration in writing and writing feedback?
	Li and Zhu (2013)	37	Patterns of computer-mediated interaction in small writing groups using wikis
	Li and Kim (2016)	31	One wiki, two groups: dynamic interactions across ESL collaborative writing tasks

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[2] The full references for the articles listed in Tables 1-3 are provided in the Appendix.

	Lockhart and Ng (1995)	27	Analyzing talk in ESL peer response groups: Stances, functions, and content
3B	Williams (2012)	61	The potential role(s) of writing in second language development
	Sun and Chang (2012)	19	Blogging to learn: Becoming EFL academic writers through collaborative dialogues
	Chen and Brown (2012)	16	The effects of authentic audience on English as a second language (ESL) writers: A task-based, computer-mediated approach
	Lin et al. (2014)	10	Blogging a journal: Changing students' writing skills and perceptions
	Ciftci and Kocoglu (2012)	10	Effects of peer e-feedback on Turkish EFL students' writing performance
3C	Elola and Oskoz (2017)	24	Writing with 21st-century social tools in the L2 classroom: New literacies, genres, and writing practices
	Zheng and Warschauer (2017)	10	Epilogue: Second language writing in the age of computer-mediated communication
	Dzekoe (2017)	9	Computer-based multimodal composing activities, self-revision, and L2 acquisition through writing
	Vandommele et al. (2017)	6	In-school and out-of-school multimodal writing as an L2 writing resource for beginner learners of Dutch
	Jiang (2018)	5	Digital multimodal composing and investment change in learners' writing in English as a foreign language
Cluster 9			
9A	Tono et al. (2014)	18	The effects of using corpora on revision tasks in L2 writing with coded error feedback
	Cotos (2014)	12	Enhancing writing pedagogy with learner corpus data
	Yoon and Jo (2014)	12	Direct and indirect access to corpora: An exploratory case study comparing students' error correction and learning strategy use in L2 writing
	Quinn (2015)	10	Training L2 writers to reference corpora as a self-correction tool
9B	Lawley (2016)	6	Spelling: Computerized feedback for self-correction
	Lawley (2015)	5	New software to help EFL students self-correct their writing
	Cowan et al. (2014)	4	ICALL for improving Korean L2 writers' ability to edit grammatical errors
Cluster 10			
10A	Tsai (2019)	8	Using google translate in EFL drafts: A preliminary investigation
	Stapleton and Kin (2019)	6	Assessing the accuracy and teachers' impressions of google translate: A study of primary L2 writers in Hong Kong
	Lee (2020)	5	The impact of using machine translation on EFL students' writing
10B	Hanaoka and Izumi (2012)	23	Noticing and uptake: Addressing pre-articulated covert problems in L2 writing
	Coyle and De Larios (2014)	13	Exploring the role played by error correction and models on children's reported noticing and output production in a L2 writing task
	Guirao et al. (2015)	11	The use of models as a written corrective feedback technique with young EFL learners

Cluster 1 was the largest cluster in this first domain and contained 362 articles, accounting for 19.97% of the network. Among the themes pertaining *teaching L2 writing as process*, Cluster 1 focused on *feedback*. Because this cluster is large, cluster analysis was conducted on the articles within this cluster alone to see if the articles are divided into different subgroups. At a resolution value of 1.0, cluster 1 was divided into four meaningful subclusters (clusters 1A-1D). The four subclusters dealt with different types of feedback: corrective feedback, peer feedback, automated feedback, and assessment for learning to write.

Cluster 1A contained 153 articles. As shown in Table 1, the articles with the highest citation counts in the network reflected the theme of *the effects of corrective feedback*. Based on the citation network of cluster 1A, Hedgcock and Lefkowitz (1996) appeared to lead this research tradition. The less cited articles in this subcluster also dealt with various aspects of corrective feedback, such as comparative effects of different types of corrective feedback (Zhang 2021), learners' perceptions of corrective feedback (Kim et al. 2020), and teachers' emotional experiences in giving feedback (Yu et al. 2021). Cluster 1B contained 95 articles. This subcluster's articles with the highest citation counts focused on *the effects of and student engagement in peer feedback*. More recent articles in this subcluster explored into the effects of online peer feedback (Yallop et al. 2021). Cluster 1C contained 77 articles. The articles with the highest citation counts focused on *automated feedback and evaluation*. Cluster 1D contained only 37 articles. This subcluster's articles pertained to *assessment for learning to write,* which examined the use and effect of writing assessment mainly for text revision.

Cluster 3 was the second dominant cluster in the first domain. It contains 227 articles, accounting for 12.52% of the network. Their investigations centered around *collaboration in L2 writing*. As shown in Figure 1, both clusters 1 and 3 diverged from Lockhart's (1995) analysis on talk in peer response groups. At a resolution value of 1.0, cluster analysis with this cluster alone yielded three meaningful subclusters (clusters 3A-3C). The three subclusters focused on different aspects of collaborative writing. Cluster 3A contained 126 articles including Lockhart (1995). This subcluster's articles with the highest citation counts explored *the effect and interaction patterns of collaborative writing*. Some studies compared the effects of collaborative writing by different groupings (e.g., small group, pair, and individual work, Dobao 2012) or by different stages of writing (e.g., prewriting discussion, revision, Neumann and McDonough 2015). Others examined web-based collaborative writing (Wang 2022), closely related to the smaller subclusters 3B and 3C. Cluster 3B contained 71 articles. This subcluster's articles explored *the roles of various web-based environments (e.g., blogging, Facebook writing) on L2 learning and writing*. Of note, out of the 71 articles, 29 (40.8%) were published within the years of 2019-2020. Cluster 3C contained 30 articles. This subcluster's articles also showed increased interest in multimodality and digital literacies, introducing a relatively new topic of *multimodal composing*. Research on multimodal composing only began to grow visible in 2017 and remains a little investigated topic in L2 writing research.

Cluster 9 contained 80 articles. This cluster's articles pertained to corpora and *self-correction*. At a resolution value of 1.0, cluster analysis with cluster 9 alone yielded two meaningful subclusters. Cluster 9A contained 59 articles. This subcluster's articles focused on *the effect of using corpora on self-correction*. Cluster 9B contained 21 articles. This subcluster's articles dealt with *the effect of computerized feedback for self-correction*.

Cluster 10 contains 60 articles. This cluster's articles with the highest citation counts focused on *instructional strategies for L2 writing*. At a resolution value of 1.0, cluster analysis with cluster 10 alone yielded two distinctive subclusters. Cluster 10A contained 31 articles. This subcluster's articles examined *the use of machine translation in L2 writing*. Given its first article being published only in 2014, this subcluster was a latecomer in L2 writing research and the articles had low citation influence, as shown in Table 2. Cluster 10B contained 29 articles. This subcluster's articles addressed *the use of model texts for young L2 learners*.

6.3 Corpus-Informed Text/Discourse Analysis

The second large group of clusters focused on *corpus informed L2 text/discourse analysis including linguistic features as a predictor of L2 writing proficiency, task complexity, voice construction and metadiscourse, and language use in different L2 writer groups.* This group comprised five neighboring clusters of 2, 5, 6, 7, and 11, accounting for

37.01% of the network. The first three clusters 2 (green), 5 (yellow) and 6 (brown) were dominant in the domain. Table 2 show each cluster's (and subcluster's) articles with the highest citation counts in the network.

Table 2. Corpus-Informed Text/Discourse Analysis

Cluster	Article	Citation score	Title
Cluster 2			
2A	Bulté and Housen (2014)	70	Conceptualizing and measuring short-term changes in L2 writing complexity
	Crossley and McNamara (2014)	52	Does writing development equal writing quality? A computational investigation of syntactic complexity in L2 writing
	Crossley and McNamara (2012)	43	Predicting second language writing proficiency: The roles of cohesion and linguistic sophistication
	Polio and Shea (2014)	43	An investigation into current measures of linguistic accuracy in second language writing research
	Yang et al. (2015)	43	Different topics, different discourse: Relationships among writing topics, measures of syntactic complexity, and judgments of writing quality
2B	Kuiken and Vedder (2008)	47	Cognitive task complexity and written output in Italian and French as a foreign language
	Johnson et al. (2012)	30	The effect of planning sub-processes on L2 writing fluency, grammatical complexity, and lexical complexity
	Frear and Bitchener (2015)	25	The effect of cognitive task complexity on writing complexity
	Ong and Zhang (2013)	24	Effects of the manipulation of cognitive processes on EFL writers' text quality
	Ong (2014)	24	How do planning time and task conditions affect metacognitive processes of L2 writers?
Cluster 5			
5A	Zhao (2013)	14	Measuring authorial voice strength in L2 argumentative writing: The development and validation of an analytic rubric
	Canagarajah (2015)	12	"Blessed in my own way": Pedagogical affordances for dialogical voice construction in multilingual student writing
	Tardy (2012)	10	Voice construction, assessment, and extra-textual identity
	Dressen-Hammouda (2014)	8	Measuring the voice of disciplinarity in scientific writing: A longitudinal exploration of experienced writers in geology
	Zhao (2017)	8	Voice in timed L2 argumentative essay in writing
5B	Hyland (2016)	24	Academic publishing and the myth of linguistic injustice
	Atkinson et al. (2015)	7	Clarifying the relationship between L2 writing and translingual writing: An open letter to writing studies editors and organization leaders
	Hartse and Kubota (2015)	6	Pluralizing English? Variation in high-stakes academic texts and challenges of copyediting
	Candarli et al. (2015)	5	Authorial presence of L1 and L2 novice academic writing: Cross-linguistic and cross-cultural perspectives
	Moreno et al. (2012)	5	Spanish researchers' perceived difficulty writing research articles for English-medium journals: The impact of proficiency in English versus publication experience
5C	Lee and Deakin (2016)	27	Interactions in L1 and L2 undergraduate student writing: Interactional metadiscourse in successful and less-successful argumentative essays
	Lee and Casal (2014)	10	Metadiscourse in results and discussion chapters: A cross-linguistic analysis of English and Spanish thesis writers in Engineering
	Mu et al. (2015)	10	The use of metadiscourse for knowledge construction in Chinese and English research articles

	Matsuda et al. (2013)	7	Writing teachers' perceptions of the presence and needs of second language writers: An institutional case study
	Hong and Cao (2014)	6	Interactional metadiscourse in young EFL learner writing a corpus-based study
Cluster 6			
6A	Li and Casanave (2012)	32	Two first-year students' strategies for writing from sources: Patchwriting or plagiarism?
	Hirvela and Du (2013)	29	"Why am I paraphrasing?": Undergraduate ESL writers' engagement with source-based academic writing and reading
	Keck (2014)	22	Copying, paraphrasing, academic writing development: A re-examination of L1 and L2 summarization practices
	Petrić (2012)	21	Legitimate textual borrowing: Direct quotation in L2 student writing
	Shi (2012)	20	Rewriting and paraphrasing source texts in second language writing
6B	Plakans and Gebril (2013)	33	Using multiple texts in an integrated writing assessment: Source text use as a predictor of score
	Yang and Plakans (2012)	20	Second language writers' strategy use and performance on an integrated reading-listening-writing task
	Gebril and Plakans (2013)	16	Toward a transparent construct of reading-to-write tasks: The interface between discourse features and proficiency
	Knoch and Sitajalabhorn (2013)	9	A closer look at integrated writing tasks: Towards a more focused definition for assessment purposes
Cluster 7			
	Bestgen and Granger (2014)	21	Quantifying the development of phraseological competence in L2 English writing: An automated approach
	Staples et al. (2013)	21	Formulaic sequences and ESP writing development: Lexical bundles in the TOEFL IBT writing section
	Friginal and Weigle (2014)	16	Exploring multiple profiles of L2 writing using multi-dimensional analysis
	Bychkovska and Lee (2017)	15	At the same time: Lexical bundles in L1 and L2 university student argumentative writing
	O'Donnell et al. (2013)	14	The development of formulaic sequences in first and second language writing investigating effects of frequency, association, and native norm
Cluster 11			
	Nishino and Atkinson (2015)	11	Second language writing as sociocognitive alignment
	Doolan and Miller (2012)	10	Generation 1.5 written error patterns: A comparative study
	di Gennaro (2013)	10	How different are they? A comparison of generation 1.5 and international L2 learners' writing ability
	Doolan (2013)	8	Generation 1.5 writing compared to L1 and L2 writing in first-year composition
	Tillema et al. (2013)	5	Quantifying the quality difference between L1 and L2 essays: A rating procedure with bilingual raters and L1 and L2 benchmark essays

Cluster 2 contained 243 articles, accounting for 13.40% of the network. The articles of this cluster analyzed *linguistic and rhetorical features as a predictor of writing proficiency and task complexity.* At a resolution value of .75, cluster 2 was divided into two meaningful subclusters. Cluster 2A contained 187 articles. This subcluster's articles with the highest citation counts focused on *syntactic and lexical indices as a predictor of writing proficiency.* Cluster 2B contained 56 articles, including Kuiken and Vedder's (2008) study on the relationships of cognitive task complexity and L2 written outputs. This subcluster's articles with the highest citation counts examined *the effects of task complexity and writing conditions.*

Cluster 5 contained 134 studies, accounting for 7.39% of the network. The theme of cluster 5 pertained to *voice construction and metadiscourse*. At the resolution value of .75, cluster analysis with cluster 5 alone yielded three meaningful subclusters. Cluster 5A contained 57 articles. This subcluster's articles with the highest citation counts focused on *authorial voice*. They analyzed textual construction of authorial voice and measured voice strength. Cluster 5B contained 39 articles. This subcluster's articles also pertained to authorial presence but with a focus on multilingual writers' right to voice out. The articles with the highest citation counts focused on *linguistic injustice and translanguaging*. Cluster 5C contained 38 articles. This subcluster's articles attended to *metadiscourse* to discover linguistic and rhetorical means for authors to construct arguments and engage audience in them.

Cluster 6 included 129 studies, accounting for 7.12% of the network. The general theme of cluster 6 was *source-based writing*. At a resolution value of .75, cluster analysis with cluster 6 alone yielded two meaningful subclusters. Cluster 6A included 93 articles. This subcluster's articles with the highest citation counts dealt with *paraphrasing and plagiarism in source-based writing*. Cluster 6B comprised 36 articles. This subcluster's articles focused on *assessment of source-based writing*.

Cluster 7 comprised 108 articles. With no meaningful subclusters, most articles in this cluster examined *formulaic sequences in L2 texts*. Some analyzed the development of formulaic sequences by L2 proficiency level, while others compared formulaic sequences use between L1 and L2 writers.

Cluster 11 contained 57 studies. With no subclusters, the focus of this cluster was on *differences in language use among generation 1.5, L1, and L2 writers*.

6.4 Interplays between Learner and Context

The last group of clusters covered various topics around *interplays between learner and context* such as *learner differences, genre-based approach, L2 writers' longitudinal development, and teacher beliefs and classroom practices*. This group comprised five clusters of 4, 8, 12, 13, and 14, accounting for 22.78% of the network. The first two clusters 4 (orange) and 8 (light blue) were dominant in the domain. Table 3 shows each cluster's (and subcluster's) articles with the highest citation counts in the network.

Table 3. Interplays between Learner and Context

Cluster	Article	Citation score	Title
Cluster 4			
	Kormos (2012)	70	The role of individual differences in L2 writing
	de Larios et al. (2008)	45	The foreign language writer's strategic behavior in the allocation of time to writing process
	Sasaki (2004)	29	A multiple-data analysis of the 3.5-year development of EFL student writers
	Harklau (2002)	23	The role of writing in classroom second language acquisition
	Teng and Zhang (2016)	21	A questionnaire-based validation of multidimensional models of self-regulated learning strategies
	Révész et al. (2017)	19	Effects of task complexity on L2 writing behaviors and linguistic complexity
Cluster 8			
	Chen and Su (2012)	18	A genre-based approach to teaching EFL summary writing
	Gebhard et al. (2013)	16	Teaching to mean, writing to mean: SFL, L2 literacy, and teacher education
	Harman (2013)	16	Literary intertextuality in genre-based pedagogies: Building lexical cohesion in fifth-grade L2 writing
	Lee (2013)	13	Becoming a writing teacher: Using 'identity' as an analytic lens to

		understand EFL writing teachers' development
De Oliveira and Lan (2014)	12	Writing science in an upper elementary classroom: A genre-based approach to teaching English language learners
Cluster 12		
Kobayashi and Rinnert (2013)	19	L1/L2/L3 writing development: Longitudinal case study of a Japanese multicompetent writer
Kobayashi and Rinnert (2008)	15	Task response and text construction across L1 and L2 writing
Hyland (2016)	13	Methods and methodologies in second language writing research
Yang et al. (2014)	11	Reactivity of concurrent verbal reporting in second language writing
Morton et al. (2015)	11	What our students tell us: Perceptions of three multilingual students on their academic writing in first year
Rinnert et al. (2015)	8	Argumentation text construction by Japanese as a foreign language writer: A dynamic view of transfer
Cluster 13		
Crusan et al. (2016)	14	Writing assessment literacy: Surveying second language teachers' knowledge, beliefs, and practices
Yang and Gao (2013)	11	Beliefs and practices of Chinese university teachers in EFL writing instruction
Harrison et al. (2016)	8	Predictors of spelling and writing skills in first- and second-language learners
Neumann (2014)	7	Teacher assessment of grammatical ability in second language academic writing: A case study
Lee and Schallert (2016)	5	Exploring the reading-writing connection: A year-long classroom-based experimental study of middle school students' developing literacy in a new language
Cluster 14		
Naghdipour (2016)	16	English writing instruction in Iran: Implications for second language writing curriculum and pedagogy
Abednia et al. (2013)	3	Reflective journal writing: Exploring in-service EFL teachers' perceptions
Majid and Stapa (2017)	3	The use of scaffolding technique via Facebook in improving descriptive writing among ESL learners
Nguyen (2018)	3	The effect of combined peer-teacher feedback on Thai students' writing accuracy
Altinmakas and Bayyurt (2019)	3	An exploratory study on factors influencing undergraduate students' academic writing practices in Turkey

Cluster 4 contained 188 articles, accounting for 10.37% of the network. This cluster was linked down from the earlier studies including Zimmerman (2000), Harklau (2002), Sasaki (2004), Zhu (2004), and de Larios et al. (2008). As shown in Figure 1, cluster 4 was thin or horizontally narrow, indicating that the articles in this cluster were closely related with one another. On the horizontal plane, the closer to each other two articles are positioned, the stronger they are connected to each other in terms of citation relation. With no meaningful subgroups, this cluster's articles with the highest citation counts examined *individual differences in writing behavior*, in relation to learner variables such as writing strategies use, metacognitive awareness, self-regulation, and motivation, as well as task variables such as whether the writing is timed or untimed, revised online or offline, and source-based or not.

Cluster 8 contained 101 articles, accounting for 5.57%. The general theme of cluster 8 pertained to *the effect of genre-based approach to teaching L2 writing*. Most of the studies examined the implementation of genre-based approach to teaching various genres of L2 writing.

The remaining three clusters comprised a small number of studies. Cluster 12 contained 57 articles. The studies in cluster 12 explored *L2 writers' longitudinal development and transfer*. Cluster 13 contained 42 articles. The general theme of this cluster was *teacher beliefs and practices of teaching and assessing L2 writing*. Cluster 14 contained 25 articles. Except for one article (Naghdipour 2016), this cluster's articles had low citation influences (0-3) and appeared less coherent in theme. Nevertheless, they largely examined various L2 writing concerns in a specific cultural context, such as scaffolding strategies, students' perceptions, or classroom practices, in a specific context, such as Iran, Turkey, or Palestine.

7. Discussion

The present study conducted a citation network analysis of L2 writing research articles during the time span of 1990-2021. The analyses yielded 14 clusters and 25 subclusters, which were distinguished into three groups, each reflecting a different theoretical and methodological angle to L2 writing research: (a) teaching L2 writing as a process, (b) corpus-informed text/discourse analysis, and (c) L2 writing as interplays between learner and context. The first group formed the largest and most dominant body of research, indicating that teaching L2 writing as a process has been of dominant interest in L2 writing scholarship. Four major research topic areas in this domain included feedback, collaboration, self-correction, and machine translation. The second group involved corpus-informed studies utilizing text and discourse analysis. The studies of this group aimed to find linguistic and rhetorical patterns in L2 texts as the effects of linguistic proficiency, task complexity, culture, and L2 writing development. Related to English writing for publication, linguistic injustice and translanguaging were also addressed in this domain. The third group has evolved between the first and second groups to detect individual and contextual specificities in L2 writing behavior and development, referring to the two groups' findings. Compared to the first two groups, the third group accounted for less of the citation network, indicating that there has been a relatively smaller amount of research during the recent decade, and a direction for research would be to accommodate into L2 writing research the diversities and authenticity of learner groups, writing tasks, and instructional contexts. Casanave's (2003) call for "more sociopolitically-oriented case study (p.85)" is still valid.

It should be noted that some topics, such as contrastive rhetoric (or L1 transfer) and L2 students' errors in writing, which have been the main focus of earlier L2 writing research, did not emerge as independent clusters. This could be due to a small fraction of earlier publications (19 studies) within the data. The limited amount of earlier publications could have also influenced the sizes of clusters and topic domains. In this regard, the interpretation of the current results needs caution.

The clusters and subclusters containing thick volumes of articles indicate that these topic areas have been given extensive research during the recent decade in the L2 writing discipline. Among the 14 clusters, the top five dominant research topic areas (clusters 1-5) explained 63.65% of the network and were (a) *feedback*, (b) *linguistic features as a predictor of L2 writing proficiency*, (c) *collaboration*, (d) *individual differences in writing behavior*, and (e) *voice construction and metadiscourse*. These five topic areas elucidate what issues and problems have been considered the most important in the L2 writing field. The dominant interest in feedback research has also been recognized in earlier reviews (Pelae-Morales, 2017, Riazi et al. 2018). In addition, many corpus-informed text analysis studies have invested in the identification of linguistic and rhetorical differences according to learners' L2 writing proficiency levels as well as what we consider to be effective discourse construction, particularly in L2 writing for academic and publication purposes. Lastly, the exploration of individual differences in L2 writing

primarily focused on the role of L2 writers' cognitive and affective variables in their writing behavior and development.

Nine subclusters with fewer than 40 articles comprised the bottom 40% in size. As a subcluster of feedback, *assessment for learning to write* (1D) contained 37 articles. Given the small number of studies, it deserves consideration whether there is sufficient research on the instructional use of scoring rubrics or portfolio assessments to facilitate better revision of L2 writing. Interest in *multimodal composing* (3C) has surged in recent years in response to the call for multimodality and digital literacies (Belcher 2017, Hafner 2020). Given the short history of research, this subtopic leaves room for further exploration. To name a few examples, issues such as the impacts of multimodal composing on literacy development and critical thinking abilities, peer interaction during multimodal composing, and the relationship between learner interaction and multimodal text qualities warrant further research (Belcher 2017, Kim and Kang 2020). Two subclusters of *voice construction and metadiscourse* (cluster 5) may deserve more research. *Linguistic injustice and translanguaging* (5B) addresses L2 writers' right to claim their bilingual identities. Given the significance of empowering L2 writers with their bilingual resources as well as diversifying scholarly publishing (Canagarajah 2022), many questions await research regarding how to accommodate these topics into postsecondary writing classrooms and high-stakes professional writing (Britton and Leonard, 2020). *Metadiscourse* (5C), as linguistic and rhetorical devices to engage audience in constructed arguments, has been studied in various contexts and texts. Still, further research on differences in metadiscourse use by learner development as well as diachronic corpus approaches are needed to help L2 writers construct effective discourse for their disciplinary audiences (Deng et al. 2021, Yoon 2021).

The remaining less researched clusters and subclusters were (a) *assessment of source-based writing* (6B), (b) *use of computerized feedback for self-correction* (9B), (c) *use of machine translation* (10A), (d) *use of model texts as a corrective feedback technique for young learners* (10B), and (e) *L2 writing concerns in specific cultural contexts* (cluster 14). The overall low citation counts and recent growth in publication numbers suggest that the topics of *computerized feedback* (9B) and *machine translation* (10A) are emerging research topics, likely in response to ongoing advancement of computer and digital technologies. On the other hand, the small amount of research on the other three topics might point to what has been underrepresented in L2 writing research. Specifically, thin research on *assessment of source-based writing* (6B) suggests that L2 writing assessment research could give more attention to real-life, classroom-based writing tasks, beyond traditional timed writing tasks, which often demand writing based on multiple reading and listening sources. In relation to *use of model texts as a corrective feedback technique for young learners* (10B), previous studies have repetitively pointed out that L2 writing research has predominantly focused on undergraduate students, largely neglecting the writings of young writers in primary and secondary schools (Geng et al. 2022, Leki et al. 2008, Riazi et al. 2018). Given the important roles of writing literacy development of young learners in their growth as writers, more in-depth research is warranted to examine various features of writings and instruction for young L2 writers. In addition, the small volume of research on *L2 writing concerns in specific cultural contexts* (cluster 14) resonates with Arik and Arik's (2017) analysis showing the predominance of L2 writing research from universities in the U.S. and Canada (Arik and Arik 2017). Given that classroom practices and their effectiveness are subject to various contextual factors such as cultural beliefs, instructional traditions, and evaluation systems (Altinmakas and Bayyurt 2019), inspections of L2 writing classroom practices in reference to specific cultural contexts would be necessary to help teachers critically evaluate their practices and search for better alternatives.

8. Limitations and Implications for Future Directions

The present study collected L2 writing articles from the WoS database, because the WoS allows the CitNetExplorer software to directly get access to the articles' citation information. Despite its wide coverage of publications across most academic disciplines, the WoS core collection of L2 writing research was limited mostly to within the recent decade (2012-2021/2). Even though citation network analysis showed the current topography in L2 writing research, it could not map the lineages and evolutions of the research areas. The inclusion of the full historical range of L2 writing articles would produce a more complete landscape of emergence and development in L2 writing research. Additionally, in conducting citation network analysis, higher or lower resolution results in different numbers of clusters and subclusters. Thus, different groupings of articles from a citation network analysis of the current data are possible and open to further exploration. Lastly, the author classified the clusters into three topic domains based on the balance between the minimum interpretable number of domains and content relatedness among clusters. Thus, different researchers might prefer different classifications. They might also classify one or more clusters as "miscellaneous," not belonging to any domain.

Regarding the suggestion for future research, although the present citation network analysis enables mapping of the knowledge structure of L2 writing research, it does not show what problems and issues have been tackled in each topic area, and how the research foci have changed over time as research findings have accumulated. In this aspect, it would be valuable to incorporate citation network analysis with other analysis methods like topic modelling. Future research utilizing topic modelling to discover thematic information of the articles within each cluster (and subcluster) found in this study would increase our understanding of the underlying patterns of themes in each area's research.

Despite the aforementioned limitations, the present study has complemented and advanced the existing reviews of L2 writing literature by employing citation network analysis. The results of the study have made evident the knowledge structure of L2 writing research, giving researchers a holistic view of what topic areas have constituted L2 writing research and how they have been interrelated to one another. Moreover, the results of the study have shown that several research topics need further research while there are topics in which our field has intensively invested its research endeavor.

References

Altinmakas, D. and Y. Bayyurt. 2019. An exploratory study on factors influencing undergraduate students' academic writing practices in Turkey. *Journal of English for Academic Purposes* 38, 88-103.

Arik, B. T. and E. Arik. 2017. Second language writing publications in Web of Science: A bibliometric analysis. *Publications* 5(1), 4.

Boyack, K. W. 2004. Mapping knowledge domains: Characterizing PNAS. *Proceedings of the National Academic of Science* 101 (suppl 1), 5192-5119.

Britton, E. R. and R. L. Leonard. 2020. The social justice potential of critical reflection and critical language awareness pedagogies for L2 writers. *Journal of Second Language Writing* 50, 100776.

Canagarajah, S. 2022. Language diversity in academic writing: toward decolonizing scholarly publishing. *Journal of Multicultural Discourse* 17(2), 1-22.

Casanave, C. P. 2003. Looking ahead to more sociopolitically-oriented case study research in L2 writing scholarship: But should it be called "post-process"? *Journal of Second Language Writing* 12(1), 85-102.

Cho, Y. and S. Park. 2012. Using citation network analysis in educational technology. *Educational Technology* 52(3), 38-42.

de Larios, J. R., R. Manchón, L. Murphy and J. Marin. 2008. The foreign language writer's strategic behavior in the allocation of time to writing processes. *Journal of Second Language Writing* 17(1), 30-47.

Deng, L., B. Fatemeh and X. Gao. 2021. Exploring the interactive and interactional metadiscourse in doctoral dissertation writing: A diachronic study. *Scientometrics* 126, 7223-7250.

Dobao, A. F. 2012. Collaborative writing tasks in the L2 classroom: Comparing group, pair, and individual work. *Journal of Second Language Writing* 21(1), 40-58.

Garfield, E., I. H. Sher and R. J. Torpie. 1964. *The Use of Citation Data in Writing the History of Science*. Philadelphia, PA: Institute for Scientific Information.

Geng, F., S. Yu, C. Liu and Z. Liu. 2022. Teaching and learning writing in English as a foreign language (EFL) school education contexts: A thematic review. *Scandinavian Journal of Educational Research* 66(3), 491-504.

Hafner, C. A. 2020. Digital multimodal composing: How to address multimodal communication forms in ELT. *English Teaching* 75(3), 133-146.

Harklau, L. 2002. The role of writing in classroom second language acquisition. *Journal of Second Language Writing* 11(4), 329-350.

Hedgcock, J. and N. Lefkowitz. 1996. Some input on input: Two analyses of student response to expert feedback in L2 writing. *Modern Language Journal* 80(3), 287-308.

Hyland, K. 1999. Academic attribution: Citation and the construction of disciplinary knowledge. *Applied Linguistics* 20(3), 341-367.

Jun, Z. 2008. A comprehensive review of studies on second language writing. *HKBU Papers in Applied Language Studies* 12(2), 89-123.

Kim, Y., B. Choi, S. Kang, B. Kim and H. Yun. 2020. Comparing the effects of direct and indirect synchronous written corrective feedback: Learning outcomes and students' perceptions. *Foreign Language Annuals* 53(1), 176-199.

Kim, Y. and S. Kang. 2020. Writing to make meaning through collaborative multimodal composing among Korean EFL learners: Writing processes, writing quality, and student perception. *Computers and Composition* 58, 102609.

Kuiken, F. and I. Vedder. 2008. Cognitive task complexity and written output in Italian and French as a foreign language. *Journal of Second Language Writing* 17(1), 48-60.

Lee, J. Y. 2017. Deep learning research trends analysis with ego centered topic citation analysis. *Journal of the Korean Society for Information Mangament* 34(4), 7-32.

Leki, I., A. Cumming. and T. Silva. 2008. *A Synthesis of Research on Second Language Writing in English*. Routledge.

Lockhart, C. and P. Ng. 1995. Analyzing talk in ESL peer response groups: Stances, functions, and content. *Language Learning* 45(4), 605-651.

Marion, L. S. E. Garfield., L. L. Hargens., L. A. Lievrouw., H. D. White and C. S. Wilson. 2003. Social network analysis and citation network analysis: Complementary approaches to the study of scientific communication. *Proceedings of the American Society for Information Science and Technology* 40(1), 486-487.

Naghdipour, B. 2016. English writing instruction in Iran: Implications for second language writing curriculum and pedagogy. *Journal of Second Language Writing* 32, 81-87.

Neumann, H. and K. McDonough. 2015. Exploring student interaction during collaborative prewriting discussions and its relationship to L2 writing. *Journal of Second Language Writing* 27, 84-104.

Nguyen, C. T. K. 2019. Overview of second and foreign language writing: Characteristics, perspectives, and pedagogical approaches. *Journal of Asia TEFL* 16(3), 1059-1068.

Parent, M. C., B. Moradi., A. S. Weis and S. Ouch. 2021. Mapping the terrain of Journal of Counseling Psychology: A citation network analysis. *Journal of Counseling Psychology* 68(4), 371-389.

Pelaez-Morales, C. 2017. L2 writing scholarship in JSLW: An updated report of research published between 1992 and 2015. *Journal of Second Language Writing* 38, 9-19.

Riazi, M., L. Shi and J. Haggerty. 2018. Analysis of the empirical research in the journal of second language writing at its 25th year (1992-2016). *Journal of Second Language Writing* 41, 41-54.

Rosvall, M. and C. T. Bergstrom. 2010. Mapping change in large networks. *PLoS One* 5(1), e8694.

Sasaki, M. 2004. A multiple-data analysis of the 3.5-year development of EFL student writers. *Language Learning* 54(3), 525-582.

Sasaki, M. 2007. Effects of study-abroad experiences on EFL writers: A multiple-data analysis. *The Modern Language Journal* 91(4), 602-620.

Van Eck., N. J. and L. Waltman. 2014. CitNetExplorer: A new software tool for analyzing and visualizing citation networks. *Journal of Informetrics* 8(4), 802-823.

Van Eck., N. J. and L. Waltman. 2017. Citation-based clustering of publications using CitNetExplorer and VOSviewer. *Scientometrics* 111, 1053-1070.

Wang, L. 2022. Effects of regulation on interaction pattern in web-based collaborative writing activity. *Computer Assisted Language Learning.* 35(1/2), 1-35.

White, E. 2019. (Re)visiting twenty-five years of writing assessment. *Assessing Writing* 42, 100419.

Yallop, R., P. Taremaa and D. Leijen. 2021. The affect and effect of asynchrnonous written feedback comments on the peer feedback process: An ethnographic case-study approach within one L2 English doctorate writing group. *Journal of Writing Research*. 12(3), 531-594.

Yoon, H. J. 2021. Interactions in EFL argumentative writing: Effects of topic, L1 background, and L2 proficiency on interactional metadiscourse. *Reading and Writing* 34, 705-725.

Yu, S. and I. Lee. 2016. Peer feedback in second language writing (2005-2014). *Language Teaching* 49(4), 461-493.

Yu, S., Y. Zheng, L. Jiang, C. Liu and Y. Xu. 2021. "I even feel annoyed and angry": Teacher emotional experiences in giving feedback on student writing. *Assessing Writing* 48, 100528.

Zhang, T. 2021. The effect of highly focused versus mid-focused written corrective feedback on EFL learners' explicit and implicit knowledge development. *System* 99, 102493.

Zheng, Y. and S. Yu. 2019. What has been assessed in writing and how? Empirical evidence from Assessing Writing (2000-2018). *Assessing Writing* 42, 100421.

Zhu, W. 2004 Faculty views on the importance of writing, the nature of academic writing, and teaching and responding to writing in the disciplines. *Journal of Second Language Writing* 13(1), 29-48.

Zimmerman, R. 2000. L2 writing: Subprocesses, a model of formulating and empirical findings. *Learning and Instruction* 10(1), 73-99.

Appendix

A. Citation Information of the Articles Listed in Table 1

Cluster 1:

Van Beuningen, C. G., N. H. De Jong and F. Kuiken. 2012. Evidence on the effectiveness of comprehensive error correction in second language writing. *Language Learning* 62(1), 1-41.

Ferris, D. R., H. Liu, A. Sinha and M. Senna. 2013. Written corrective feedback for individual L2 writers. *Journal of Second Language Writing* 22(3), 307-329.

Shintani, N. and R. Ellis. 2013. The comparative effect of direct written corrective feedback and metalinguistic explanation on learners' explicit and implicit knowledge of the English indefinite article. *Journal of Second Language Writing* 22(3), 286-306.

Kang, E. and Z. Han. 2015. The efficacy of written corrective feedback in improving L2 written accuracy: A meta-analysis. *The Modern Language Journal* 99(1), 1-18.

Shintani, N., R. Ellis and W. Suzuki. 2014. Effects of written feedback and revision on learners' accuracy in using two English grammatical structures. *Language Learning* 64(1), 103-131.

Yu, S. and I. Lee. 2016. Peer feedback in second language writing (2005-2014). *Language Teaching* 49(4), 461-493.

Rahimi, M. 2013. Is training student reviewers worth its while? A study of how training influences the quality of students' feedback and writing. *Language Teaching Research* 17(1), 67-89.

Yu, S. and I. Lee. 2015. Understanding EFL students' participation in group peer feedback of L2 writing: A case study from an activity theory perspective. *Language Teaching Research* 19(5), 572-593.

Zhu, W. and D. A. Mitchell. 2012. Participation in peer response as activity: An examination of peer response stances from an activity theory perspective. *TESOL Quarterly* 46(2), 362-386.

Wang, W. 2014. Students' perceptions of rubric-referenced peer feedback on EFL writing: A longitudinal inquiry. *Assessing Writing* 19, 80-96.

Zhang, Z. V. and K. Hyland. 2018. Student engagement with teacher and automated feedback on L2 writing. *Assessing Writing* 36, 90-102.

Li, J., S. Link and V. Hegelheimer. 2015. Rethinking the role of automated writing evaluation (AWE) feedback in ESL writing instruction. *Journal of Second Language Writing* 27, 1-18.

Wang, Y. J., H. F. Shang and P. Briody. 2013. Exploring the impact of using automated writing evaluation in English as foreign language university students' writing. *Computer-Assisted Language Learning* 26(3), 234-257.

Dikli, S. and S. Bleyle. 2014. Automated essay scoring feedback for second language writers: How does it compare to instructor feedback? *Assessing Writing* 22, 1-17.

Zhang, Z. 2017. Student engagement with computer-generated feedback: A case study. *ELT Journal* 71(3), 317-328.

Lee, I. and D. Coniam. 2013. Introducing assessment for learning EFL writing in an assessment of learning examination-driven system in Hong Kong. *Journal of Second Language Writing* 22(1), 34-50.

Mak, P. and I. Lee. 2014. Implementing assessment for learning in L2 writing: An activity theory perspective. *System* 47, 73-87.

Lam, R. 2013. The relationship between assessment types and text revision. *ELT Journal* 67(4), 446-458.

Lee, I. 2016. Putting students at the center of classroom L2 writing assessment. *Canadian Modern Language Review* 72(2), 258-280.

Ene, E. and V. Kosobucki. 2016. Rubrics and corrective feedback in ESL writing: A longitudinal case study of an L2 writer. *Assessing Writing* 30, 3-20.

Cluster 3

Dobao, A. F. 2012. Collaborative writing tasks in the L2 classroom: Comparing group, pair, and individual work. *Journal of Second Language Writing* 21(1), 40-58.

Wigglesworth, G. and N. Storch. 2012. What role for collaboration in writing and writing feedback? *Journal of Second Language Writing* 21(4), 364-374.

Li, M. and W. Zhu. 2013. Patterns of computer-mediated interaction in small writing groups using wikis. *Computer-Assisted Language Learning* 26(1), 61-82.

Li, M. and D. Kim. 2016. One wiki, two groups: dynamic interactions across ESL collaborative writing tasks. *Journal of Second Language Writing* 31, 25-42.

Lockhart, C. and P. Ng. 1995. Analyzing talk in ESL peer response groups: Stances, functions, and content. *Language Learning* 45(4), 605-651.

Williams, J. 2012. The potential role(s) of writing in second language development. *Journal of Second Language Writing* 21(4), 321-331.

Sun, Y. C. and Y. J. Chang. 2012. Blogging to learn: Becoming EFL academic writers through collaborative dialogues. *Language Learning & Technology* 16(1), 43-61.

Chen, J. C. and K. L. Brown. 2012. The effects of authentic audience on English as a second language (ESL) writers: A task-based, computer-mediated approach. *Computer-Assisted Language Learning* 25(5), 435-454.

Lin, M. H., J. J. Li., P. Y. Hung and H. W. Huang. 2014. Blogging a journal: Changing students' writing skills and perceptions. *ELT Journal* 68(4), 422-431.

Ciftci, H. and Z. Kocoglu. 2012. Effects of peer e-feedback on Turkish EFL students' writing performance. *Journal of Educational Computing Research* 46(1), 61-84.

Elola, I. and A. Oskoz. 2017. Writing with 21st-century social tools in the L2 classroom: New literacies, genres, and writing practices. *Journal of Second Language Writing* 36, 52-60.

Zheng, B. and M. Warschauer. 2017. Epilogue: Second language writing in the age of computer-mediated communication. *Journal of Second Language Writing* 36, 61-67.

Dzekoe, R. 2017. Computer-based multimodal composing activities, self-revision, and L2 acquisition through writing. *Language Learning & Technology* 21(2), 73-95.

Vandommele, G., K. Van den Branden., K. Van Gorp and S. De Maeyer. 2017. In-school and out-of-school multimodal writing as an L2 writing resource for beginner learners of Dutch. *Journal of Second Language Writing* 36, 23-36.

Jiang, L. 2018. Digital multimodal composing and investment change in learners' writing in English as a foreign language. *Journal of Second Language Writing* 40, 60-72.

Cluster 9

Tono, Y., Y. Satake. and A. Miura. 2014. The effects of using corpora on revision tasks in L2 writing with coded error feedback. *ReCALL* 26(2), 147-162.

Cotos, E. 2014. Enhancing writing pedagogy with learner corpora data. *ReCALL* 26(2), 202-224.

Yoon, H. and J. Jo. 2014. Direct and indirect access to corpora: An exploratory case study comparing students' error correction and learning strategy use in L2 writing. *Language Learning & Technology* 18(1), 96-117.

Quinn, C. 2015. Training L2 writers to reference corpora as a self-correction tool. *ELT Journal* 69(2), 165-177.

Lawley, J. 2016. Spelling: Computerized feedback for self-correction. *Computer-Assisted Language Learning* 29(5), 868-880.

Lawley, J. 2015. New software to help EFL students self-correct their writing. *Language Learning & Technology* 19(1), 23-33.

Cowan, R., J. Choo and G. S. Lee. 2014. ICALL for improving Korean L2 writers' ability to edit grammatical errors. *Language Learning & Technology* 18(3), 193-207.

Cluster 10

Tsai, S. C. 2019. Using google translate in EFL drafts: A preliminary investigation. *Computer Assisted Language Learning* 32(5-6), 510-526.

Stapleton, P. and B. L. K. Kin. 2019. Assessing the accuracy and teachers' impressions of google translate: A study of primary L2 writers in Hong Kong. *English for Specific Purposes* 56, 18-34.

Lee, S. M. 2020. The impact of using machine translation on EFL students' writing. *Computer Assisted Language Learning* 33(3), 157-175.

Hanaoka, O. and S. Izumi. 2012. Noticing and uptake: Addressing pre-articulated covert problems in L2 writing. *Journal of Second Language Writing* 21(4), 332-347.

Coyle, Y. and J. R. De Larios. 2014. Exploring the role played by error correction and models on children's reported noticing and output production in a L2 writing task. *Studies in Second Language Acquisition* 36(3), 451-485.

Guirao, J. C., J. R. de Larios. and Y. Coyle. 2015. The use of models as a written corrective feedback technique with young EFL learners. *System* 52, 63-77.

B. Citation Information of the Articles Listed in Table 2

Cluster 2

Bulté, B. and A. Housen. 2014. Conceptualizing and measuring short-term changes in L2 writing complexity. *Journal of Second Language Writing* 26, 42-65.

Crossley, S. A. and D. S. McNamara. 2014. Does writing development equal writing quality? A computational investigation of syntactic complexity in L2 writing. *Journal of Second Language Writing* 26, 66-79.

Crossley, S. A. and D. S. McNamara. 2012. Predicting second language writing proficiency: The roles of cohesion and linguistic sophistication. *Journal of Research in Reading* 35(2), 115-135.

Polio, C. and M. C. Shea. 2014. An investigation into current measures of linguistic accuracy in second language writing research. *Journal of Second Language Writing* 26, 10-27.

Yang, W., X. Lu and S. C. Weigle. 2015. Different topics, different discourse: Relationships among writing topics, measures of syntactic complexity, and judgments of writing quality. *Journal of Second Language Writing* 28, 53-67.

Kuiken, F. and I. Vedder. 2008. Cognitive task complexity and written output in Italian and French as a foreign language. *Journal of Second Language Writing* 17(1), 48-60.

Johnson, M. D., L. Mercado and A. Acevedo. 2012. The effect of planning sub-processes on L2 writing fluency, grammatical complexity, and lexical complexity. *Journal of Second Language Writing* 21(3), 264-282.

Frear, M. W. and J. Bitchener. 2015. The effect of cognitive task complexity on writing complexity. *Journal of Second Language Writing* 30, 45-57.

Ong, J. and L. J. Zhang. 2013. Effects of the manipulation of cognitive processes on EFL writers' text quality. *TESOL Quarterly* 47(2), 375-398.

Ong, J. 2014. How do planning time and task conditions affect metacognitive processes of L2 writers? *Journal of Second Language Writing* 23, 17-30.

Cluster 5

Zhao, C. G. 2013. Measuring authorial voice strength in L2 argumentative writing: The development and validation of an analytic rubric. *Language Testing* 30(2), 201-230.

Canagarajah, A. S. 2015. "Blessed in my own way": Pedagogical affordances for dialogical voice construction in multilingual student writing. *Journal of Second Language Writing* 27, 122-139.

Tardy, C. M. 2012. Voice construction, assessment, and extra-textual identity. *Research in the Teaching of English* 47(1), 64-99.

Dressen-Hammouda, D. 2014. Measuring the voice of disciplinarity in scientific writing: A longitudinal exploration of experienced writers in geology. *English for Specific Purposes* 34, 14-25.

Zhao, C. G. 2017. Voice in timed L2 argumentative essay in writing. *Assessing Writing* 31, 78-83.

Hyland, K. 2016. Academic publishing and the myth of linguistic injustice. *Journal of Second Language Writing* 31, 58-69.

Atkinson, D., D. Crusan., P. K. Matsuda., C. Ortmeier-Hooper., T. Ruecker., S. Simpson and C. Tardy. 2015. Clarifying the relationship between L2 writing and translingual writing: An open letter to writing studies editors and organization leaders. *College English* 77(4), 383-386.

Hartse, J. H. and R. Kubota. 2014. Pluralizing English? Variation in high-stakes academic texts and challenges of copyediting. *Journal of Second Language Writing* 24, 71-82.

Çandarli, D., Y. Bayyurt and L. Marti. 2015. Authorial presence of L1 and L2 novice academic writing: Cross-linguistic and cross-cultural perspectives. *Journal of English for Academic Purposes* 20, 192-202.

Moreno, A. I., J. Rey-Rocha., S. Burgess., I. López-Navarro. and I. Sachdev. 2012. Spanish researchers' perceived difficulty writing research articles for English-medium journals: The impact of proficiency in English versus publication experience. *Ibérica: Revista de la Asociación Europea de Lenguas para Fines Específicos* 24, 157-183.

Lee, J. J. and L. Deakin, L. 2016. Interactions in L1 and L2 undergraduate student writing: Interactional metadiscourse in successful and less-successful argumentative essays. *Journal of Second Language Writing* 33, 21-34.

Lee, J. J. and J. E. Casal. 2014. Metadiscourse in results and discussion chapters: A cross-linguistic analysis of English and Spanish thesis writers in Engineering. *System* 46, 39-54.

Mu, C., L. J. Zhang, J. Ehrich and H. Hong. 2015. The use of metadiscourse for knowledge construction in Chinese and English research articles. *Journal of English for Academic Purposes* 20, 135-148.

Matsuda, P. K., T. Saenkhum and S. Accardi. 2013. Writing teachers' perceptions of the presence and needs of second language writers: An institutional case study. *Journal of Second Language Writing* 22(1), 68-86.

Hong, H. and F. Cao. 2014. Interactional metadiscourse in young EFL learner writing: A corpus-based study. *International Journal of Corpus Linguistics* 19(2), 201-224.

Cluster 6

Li, Y. and C. P. Casanave. 2012. Two first-year students' strategies for writing from sources: Patchwriting or plagiarism? *Journal of Second Language Writing* 21(2), 165-180.

Hirvela, A. and Q. Du. 2013. "Why am I paraphrasing?": Undergraduate ESL writers' engagement with source-based academic writing and reading. *Journal of English for Academic Purposes* 12(2), 87-98.

Keck, C. 2014. Copying, paraphrasing, academic writing development: A re-examination of L1 and L2 summarization practices. *Journal of Second Language Writing* 25, 4-22.

Petrić, B. 2012. Legitimate textual borrowing: Direct quotation in L2 student writing. *Journal of Second Language Writing* 21(2), 102-117.

Shi, L. 2012. Rewriting and paraphrasing source texts in second language writing. *Journal of Second Language Writing* 21(2), 134-148.

Plakans, L. and A. Gebril. 2013. Using multiple texts in an integrated writing assessment: Source text use as a predictor of score. *Journal of Second Language Writing* 22(3), 217-230.

Yang, H. C. and L. Plakans. 2012. Second language writers' strategy use and performance on an integrated reading-listening-writing task. *TESOL Quarterly* 46(1), 80-103.

Gebril, A. and L. Plakans. 2013. Toward a transparent construct of reading-to-write tasks: The interface between discourse features and proficiency. *Language Assessment Quarterly* 10(1), 9-27.

Knoch, U. and W. Sitajalabhorn. 2013. A closer look at integrated writing tasks: Towards a more focused definition for assessment purposes. *Assessing Writing* 18(4), 300-308.

Cluster 7

Bestgen, Y. and S. Granger. 2014. Quantifying the development of phraseological competence in L2 English writing: An automated approach. *Journal of Second Language Writing* 26, 28-41.

Staples, S., J. Egbert., D. Biber and A. McClair. 2013. Formulaic sequences and ESP writing development: Lexical bundles in the TOEFL IBT writing section. *Journal of English for Academic Purposes* 12(3), 214-225.

Friginal, E. and S. Weigle. 2014. Exploring multiple profiles of L2 writing using multi-dimensional analysis. *Journal of Second Language Writing* 26, 80-95.

Bychkovska, T. and J. J. Lee. 2017. At the same time: Lexical bundles in L1 and L2 university student argumentative writing. *Journal of English for Academic Purposes* 30, 38-52.

O'Donnell, M. B., U. Römer and N. C. Ellis. 2013. The development of formulaic sequences in first and second language writing investigating effects of frequency, association, and native norm. *International Journal of Corpus Linguistics* 18(1), 83-108.

Cluster 11

Nishino, T. and D. Atkinson. 2015. Second language writing as sociocognitive alignment. *Journal of Second Language Writing* 27, 37-54.

Doolan, S. M. and D. Miller. 2012. Generation 1.5 written error patterns: A comparative study. *Journal of Second Language Writing* 21(1) 1-22.

di Gennaro, K. 2013. How different are they? A comparison of generation 1.5 and international L2 learners' writing ability. *Assessing Writing* 18(2), 154-172.

Doolan, S. M. 2013. Generation 1.5 writing compared to L1 and L2 writing in first-year composition. *Written Communication* 30(2), 135-163.

Tillema, M., H. van den Bergh., G. Rijlaarsdam. and T. Sanders. 2013. Quantifying the quality difference between

L1 and L2 essays: A rating procedure with bilingual raters and L1 and L2 benchmark essays. *Language Testing* 30(1), 71-97.

C. Citation Information of the Articles Listed in Table 3

Cluster 4

Kormos, J. 2012. The role of individual differences in L2 writing. *Journal of Second Language Writing* 21(4), 390-403.

de Larios, J. R., R. Manchón, L. Murphy and J. Marin. 2008. The foreign language writer's strategic behavior in the allocation of time to writing process. *Journal of Second Language Writing* 17(1), 30-47.

Sasaki, M. 2004. A multiple-data analysis of the 3.5-year development of EFL student writers. *Language Learning* 54(3), 525-582.

Harklau, L. 2002. The role of writing in classroom second language acquisition. *Journal of Second Language Writing* 11(4), 329-350.

Teng, L. S. and L. J. Zhang. 2016. A questionnaire-based validation of multidimensional models of self-regulated learning strategies. *The Modern Language Journal* 100(3), 674-701.

Révész, A., N. E. Kourtali and D. Mazgutova. 2017. Effects of task complexity on L2 writing behaviors and linguistic complexity. *Language Learning* 67(1), 208-241.

Cluster 8

Chen, Y. S. and S. W. Su. 2012. A genre-based approach to teaching EFL summary writing. *ELT Journal* 66(2), 184-192.

Gebhard, M., I. A. Chen., H. Graham and W. Gunawan. 2013. Teaching to mean, writing to mean: SFL, L2 literacy, and teacher education. *Journal of Second Language Writing* 22(2), 107-124.

Harman, R. 2013. Literary intertextuality in genre-based pedagogies: Building lexical cohesion in fifth grade L2 writing. *Journal of Second Language Writing* 22(2), 125-140.

Lee, I. 2013. Becoming a writing teacher: Using 'identity' as an analytic lens to understand EFL writing teachers' development. *Journal of Second Language Writing* 22(3), 330-345.

De Oliveira, L. C. and S. W. Lan. 2014. Writing science in an upper elementary classroom: A genre-based approach to teaching English language learners. *Journal of Second Language Writing* 25, 23-39.

Cluster 12

Kobayashi, H. and C. Rinnert. 2013. L1/L2/L3 writing development: Longitudinal case study of a Japanese multicompetent writer. *Journal of Second Language Writing* 22(1), 4-33.

Kobayashi, H. and C. Rinnert. 2008. Task response and text construction across L1 and L2 writing. *Journal of Second Language Writing* 17(1), 7-29.

Hyland, K. 2016. Methods and methodologies in second language writing research. *System* 59, 116-125.

Yang, C., G. Hu and L. J. Zhang. 2014. Reactivity of concurrent verbal reporting in second language writing. *Journal of Second Language Writing* 24, 51-70.

Morton, J., N. Storch. and C. Thompson. 2015. What our students tell us: Perceptions of three multilingual students on their academic writing in first year. *Journal of Second Language Writing* 30, 1-13.

Rinnert, C., H. Kobayashi and A. Katayama. 2015. Argumentation text construction by Japanese as a foreign language writer: A dynamic view of transfer. *The Modern Language Journal* 99(2), 213-245.

Cluster 13

Crusan, D., L. Plakans and A. Gebril. 2016. Writing assessment literacy: Surveying second language teachers' knowledge, beliefs, and practices. *Assessing Writing* 28, 43-56.

Yang, L. and S. Gao. 2013. Beliefs and practices of Chinese university teachers in EFL writing instruction. *Language, Culture and Curriculum* 26(2), 128-145.

Harrison, G. L., L. D. Goegan, R. Jalbert, K. McManus, K. Sinclair and J. Spurling. 2016. Predictors of spelling and writing skills in first- and second-language learners. *Reading and Writing* 29(1), 69-89.

Neumann, H. 2014. Teacher assessment of grammatical ability in second language academic writing: A case study. *Journal of Second Language Writing* 24, 83-107.

Lee, J. and D. L. Schallert. 2016. Exploring the reading-writing connection: A year-long classroom-based experimental study of middle school students' developing literacy in a new language. *Reading Research Quarterly* 51(2), 143-164.

Cluster 14

Naghdipour, B. 2016. English writing instruction in Iran: Implications for second language writing curriculum and pedagogy. *Journal of Second Language Writing* 32, 81-87.

Abednia, A., A. Hovassapian., S. Teimournezhad and N. Ghanbari. 2013. Reflective journal writing: Exploring in-service EFL teachers' perceptions. *System* 41(3), 503-514.

Majid, A. H. A. and S. H. Stapa. 2017. The use of scaffolding technique via Facebook in improving descriptive writing among ESL learners. *3L*: *Language, Linguistics, Literature* 23(4), 77-88.

Nguyen, T. T. L. 2018. The effect of combined peer-teacher feedback on Thai students' writing accuracy. *Iranian Journal of Language Teaching Research* 6(2), 117-132.

Altinmakas, D. and Y. Bayyurt. 2019. An exploratory study on factors influencing undergraduate students' academic writing practices in Turkey. *Journal of English for Academic Purposes* 37, 88-103.

Examples in: English
Applicable Languages: English
Applicable Level: Tertiary