

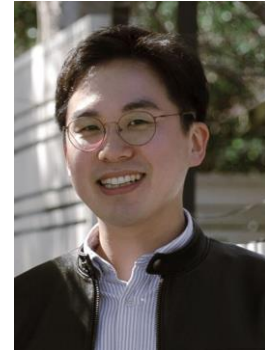


Title of Project:

Investigating the Interactions among Genre, Task Complexity, and Proficiency in L2 Writing: A Comprehensive Text Analysis and Study of Learner Perceptions

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Final Report

Motivation for the Research

Second language (L2) learners' performance on one writing task may not fully reflect their writing proficiency, due to the complex, multidimensional nature of writing proficiency (Norris & Manchón, 2012). Therefore, researchers have suggested that more than one task should be employed to gain a fuller picture of learners' writing proficiency (Bouwer et al., 2015; Horowitz, 1986), and what is important is for practitioners to implement multiple tasks with a clear understanding of how task differences influence learners' language use and development. The current research aims to disentangle the interactions among genre, task complexity, and L2 proficiency in ESL students' language production and perceptions. In task-based writing research authors began to examine cognitive task complexity to see how it interplays within written discourse (see Plonsky & Kim, 2016), manipulating task dimensions within a specific written genre (e.g., Ong & Zhang, 2010; idea support condition manipulated in argumentative) or operationalizing genre as a cognitive complexity dimension (e.g., Ruiz-Funes, 2015; expository writing operationalized as more complex than narrative).

However, due to several fundamental differences between the two modalities (written and oral language), researchers have expressed concerns about the validity of the direct application of cognitive complexity hypotheses to writing (Polio & Yoon, 2016). Additionally, genre as a task variable needs to be analyzed with caution because there are two research lines that address a similar issue with different starting points and purposes (i.e., one on genre effects and the other on task complexity effects), potentially resulting in diverging interpretations. To explore the validity of genre and task manipulations, this study examines L2 students' production and perceptions across four writing tasks, together with teachers' perceptions of the tasks. Also, to go beyond the tradition of comparing linguistic complexity differences against two competing task complexity hypotheses in task research (see Robinson, 2011), this study analyzes textual features that have been underexplored, offering insights into how such features interact with genre and task factors.



Research Questions

Considering writing as discourse, genre studies have explained the use of genre-specific linguistic constructions in alignment with the functional demands of each genre (e.g., Beers & Nagy, 2009; Biber & Conrad, 2009; Yoon & Polio, 2016). For example, narrative and argumentative essays serve different purposes (i.e., tell a story in chronological order or make a convincing argument), and, therefore, they require different linguistic structures (e.g., narrative: time adverbial clauses and personal pronouns; argumentative: relative clauses and nominal post-modifiers). On the other hand, task complexity research (e.g., Kormos, 2011; Kuiken & Vedder, 2008; Ong & Zhang, 2010) has examined task manipulation effects on linguistic features with the assumption that language differences are associated with varying levels of cognitive demands of tasks. In this research line, while various task features have been manipulated within a genre (e.g., number of elements) for language changes, several recent studies have operationalized genre as one of the cognitive complexity variables (e.g., Ruiz-Funes, 2015; Yang, 2014). For example, Ruiz-Funes (2015) explored linguistic changes across different genres, with narrative/analytic writing operationalized as low reasoning tasks and expository/argumentative writing as high reasoning ones, thereby interpreting her finding of increased linguistic complexity in expository/argumentative writing as the outcome of higher task demands.

While genre research and inter-genre task research have produced comparable findings (e.g., higher syntactic complexity in non-narratives), the two lines of research are grounded in different theoretical assumptions. Also, genre research focuses on raising awareness of genre-appropriate communication and language (learning-to-write), whereas the major implication of task research is related to how to promote language development more effectively (writing-to-learn). Given these distinct premises, it seems important to explicate the link between task perceptions and language use, leading to the construction of more valid and effective writing tasks for L2 instruction and assessment. For task perception data, I used a self-rating questionnaire that has been shown to measure participants' cognitive processes validly (Révész et al., 2016; Sasayama, 2016). Here, by collecting data from ESL teachers and ESL students, I attempted to reveal a potential gap between ESL teachers' expectations of different task types and ESL students' actual perceptions of the tasks. A comprehensive analysis of textual features, which would not be limited to complexity or accuracy measures, would contribute to providing a fuller picture of the interactions between genre and task in L2 writing. Two additional areas for text analysis are cohesion and interactional metadiscourse features as previous research has shown differing uses of connectives and stance markers across different writing tasks (e.g., Hong & Cao, 2014; Kormos, 2011). The research questions addressed in this study are as follows:

1. How do ESL students and teachers perceive the writing tasks manipulated in terms of genre and task complexity?
2. What are the effects of genre and task complexity on textual features in ESL writing?
 - 2.1. How does L2 proficiency interact with task type effects on textual features?
3. How do textual features contribute to the overall quality of narrative and argumentative writing?
 - 3.1. How does L2 proficiency interact with task type effects on writing scores?

Research Methodology



For this study, I collected data from 76 ESL students enrolled in the two highest levels of a U.S. English language program. Each participant wrote four essays: two narrative and two argumentative essays. Within each genre, the condition of idea support was manipulated. The tasks with idea support (less complex) were given to participants with some information that they could utilize while writing. To avoid potential topic influences, I devised the prompts that have the shared topic of foreign language learning or use. Data was collected at one-week intervals, with the order of the prompts counterbalanced and the genres alternated. A cloze test was used to measure participants' general English proficiency (Brown, 1978), and a modified version of the task perception questionnaire (Révész et al., 2015) was used to elicit students' and teachers' perceptions of the tasks to compare students' perceptions with teachers' intention of task use. To evaluate the quality of the student essays, I used an analytic scale (Polio, 2013), adapted from the ESL composition profile (Jacobs et al., 1981). For quantitative text analysis, four natural language processing tools were used: Coh-Metrix (McNamara et al., 2014), L2 Syntactic Complexity Analyzer (Lu, 2010), the Multidimensional Analysis Tagger (henceforth MAT; Nini, 2015), and Authorial Voice Analyzer (Yoon, 2017). The use of these processing tools was intended not only to address the multidimensional features of linguistic complexity (Norris & Ortega, 2009) but also to explore discourse features beyond traditional linguistic measures valid in task research. Measures of syntactic complexity were obtained using SCA, MAT, and Coh-Metrix. Coh-Metrix and MAT were further used for lexical and discourse-level features. Last, AVA was employed for interactional metadiscourse features. Using these quantitative results, I explored how genre and task complexity influence textual features and identify how these features distinctly contribute to the writing quality of each genre. This quantitative investigation was followed by a qualitative text analysis that allows for a systematic exploration of the link between linguistic features and their functions in relation to contexts (Schleppegrell, 2004).

Summary of Findings

From the task perception result, I found a gap between the student and teacher groups regarding their views of the two genres. Specifically, the teachers predicted that ESL students would have greater difficulty in completing the argumentative genre than the narrative, but, instead, the students perceived both genres as involving a similar level of complexity and difficulty. Also, unlike teachers' expectations, students consistently judged the tasks with idea support as less complex and less difficult. One common result from both groups was their judgments of the narrative genre as sparking greater interest and motivation for further writing than the argumentative.

The writing result showed that the students' language varied to a greater extent across the two genres but not across the idea support conditions. This result suggests that there is a very weak link between writers' task perceptions and language production, challenging the common practice of task-based writing research. Therefore, this result points to the importance of exploring these two different result types separately in written discourse because changes in writers' language are largely motivated by the varying communicative functions of different genres and not by a task's cognitive constraints, which are imposed on writers.

Implications

The presumption that I intended to explore and challenge involved the genre-cognition connection in L2 writing research. Thus far, many L2 researchers have explained their findings



of cross-genre language and score differences as arising from the difference in cognitive pressure between genres, and this practice has been widely accepted in the field because many have believed that linguistic features are dependent on cognitive processes due to humans' limited cognitive resources, as well as the majority of previous research, which has produced very consistent findings of higher linguistic complexity and lower essay scores in the argumentative genre than the narrative. However, as evidenced by the findings of the current study, it was found that the majority of the textual features are a manifestation of a set of communicative functions demanded by each genre, while lexical sophistication is one of a few areas that were shown to differ according to the cognitive complexity of writing tasks.

Furthermore, due to a widespread belief that argumentative writing, a cognitively challenging task, is most suitable for testing purposes, L2 writing teachers tend to focus on developing students' skills for argumentative writing; accordingly, they have paid relatively less attention to other genres, such as narrative or descriptive writing. Similarly, it is likely that teachers assume that they do not need any more instruction for narrative writing when their students show sufficient skills for argumentative writing because of their conception of narrative writing as a simpler task than argumentative writing. However, based on the finding of this study, I argue that teachers should not make an a priori decision on how tasks will work and what to include in a curriculum.



References

- Aull, L. L., & Lancaster, Z. (2014). Linguistic markers of stance in early and advanced academic writing: A corpus-based comparison. *Written Communication, 31*(2), 151–183.
- Barkaoui, K. (2016). What and when second-language learners revise when responding to timed writing tasks on the computer: The roles of task type, second language proficiency, and keyboarding skills. *The Modern Language Journal, 100*(1), 320–240.
- Beauvais, C., Olive, T., & Passerault, J. M. (2011). Why are some texts good and others not? Relationship between text quality and management of the writing processes. *Journal of Educational Psychology, 103*(2), 415–428.
- Beers, S., & Nagy, W. (2009). Syntactic complexity as a predictor of adolescent writing quality: Which measures? Which genre? *Reading and Writing, 22*(2), 185–200.
- Beers, S., & Nagy, W. (2011). Writing development in four genres from grades three to seven: Syntactic complexity and genre differentiation. *Reading and Writing, 24*(2), 183–202.
- Bereiter, C., & Scardamalia, M. (1987). *The psychology of written composition*. Hillsdale, NJ: Lawrence Erlbaum.
- Berman, R. A. (2008). The psycholinguistics of developing text construction. *Journal of Child Language, 35*(4), 735–771.
- Berman, R. A., & Katzenberger, I. (2004). Form and function in introducing narrative and expository texts: A developmental perspective. *Discourse Processes, 38*(1), 57–94.
- Berman, R. A., & Nir-Sagiv, B. (2004). Linguistic indicators of inter-genre differentiation in later language development. *Journal of Child Language, 31*(2), 339–380.
- Berman, R. A., & Nir-Sagiv, B. (2007). Comparing narrative and expository text construction across adolescence: A developmental paradox. *Discourse Processes, 43*(2), 79–120.
- Berman, R. A., & Slobin, D. I. (1994). *Relating events in narrative: A crosslinguistic developmental study*. Hillsdale, NJ: Erlbaum.
- Biber, D. (1988). *Variation across speech and writing*. Cambridge, UK: Cambridge University Press.
- Biber, D. (2006a). *A corpus-based study of spoken and written registers*. Amsterdam, The Netherlands: John Benjamins.
- Biber, D. (2006b). Stance in spoken and written university registers. *Journal of English for Academic Purposes, 5*(2), 97–116.



- Biber, D., & Conrad, S. (2009). *Register, genre, and style*. Cambridge, UK: Cambridge University Press.
- Biber, D., & Gray, B. (2010). Challenging stereotypes about academic writing: Complexity, elaboration, explicitness. *Journal of English for Academic Purposes*, 9(1), 2–20.
- Biber, D., Gray, B., & Poonpon, K. (2011). Should we use characteristics of conversation to measure grammatical complexity in L2 writing development? *TESOL Quarterly*, 45(1), 5–35.
- Biber, D., Johansson, S., Leech, G., Conrad, S., & Finegan, E. (1999). *Longman grammar of spoken and written English*. Harlow, UK: Longman.
- Bouwer, R., Béguin, A., Sanders, T., & van den Bergh, H. (2015). Effect of genre on the generalizability of writing scores. *Language Testing*, 32(1), 83–100.
- Brossell, G. (1983). Rhetorical specification in essay topics. *College English*, 45(2), 165–173.
- Brown, J. D. (1978). *Correlational study of four methods for scoring cloze tests*. MA Thesis, University of California at Los Angeles.
- Brown, J. D. (1980). Relative merits of four methods for scoring cloze tests. *The Modern Language Journal*, 64(3), 311–317.
- Brown, J. D., Hilgers, T., & Marsella, J. (1991). Essay prompts and topics: Minimizing the effect of mean differences. *Written Communications*, 8(4), 533–556.
- Brünken, R., Seufert, T., & Paas, F. (2010). Measuring cognitive load. In J. L. Plass, R. Moreno, & R. Brünken (Eds.), *Cognitive load theory* (pp. 181–202). Cambridge, UK: Cambridge University Press.
- Bulté, B., & Housen, A. (2014). Conceptualizing and measuring short-term changes in L2 writing complexity. *Journal of Second Language Writing*, 26, 42–65.
- Butler, Y. G., & Iino, M. (2005). Current Japanese reforms in English language education: The 2003 ‘Action Plan’. *Language Policy*, 4(1), 25–45.
- Byun, K., Chu, H., Kim, M., Park, I., Kim, S., & Jung, J. (2011). English-medium teaching in Korean higher education: Policy debates and reality. *Higher Education*, 62(4), 431–449.
- Common Core State Standards (CCSS). (2017). *English language arts standards*. Retrieved from <http://www.corestandards.org/ELA-Literacy/>
- Chafe, W. L. (1982). Integration and involvement in speaking, writing, and oral literature. In D. Tannen (Ed.), *Spoken and written language: Exploring orality and literacy* (pp. 35–54). Norwood, NJ: Ablex.



- Cheng, L. (2008). The key to success: English language testing in China. *Language Testing*, 25(1), 15–37.
- Chenoweth, N. A., & Hayes, J. R. (2001). Fluency in writing: Generating text in L1 and L2. *Written Communication*, 18(1), 80–98.
- Chow, A. W., & Mok-Cheung, A. H. (2004). English language teaching in Hong Kong SAR: Tradition, translation and transformation. In W. K. Ho & R. Y. L. Wong (Eds.), *English language teaching in East Asia today* (pp. 150–177). Singapore: Eastern Universities Press.
- Christie, F. (1997). Curriculum macrogenres as forms of initiation into a culture. In F. Christie & J. R. Martin (Eds.), *Genre and institutions: Social processes in the workplace and school* (pp. 134–160). New York, NY: Continuum.
- Crossley, S. A., Cobb, T., & McNamara, D. S. (2013). Comparing count-based and band-based indices of word frequency: Implications for active vocabulary research and pedagogical applications. *System*, 41, 965–981.
- Crossley, S. A., Kyle, C., & McNamara, D. S. (2016). The development and use of cohesive devices in L2 writing and their relations to judgments of essay quality. *Journal of Second Language Writing*, 32, 1–16.
- Crossley, S. A., & McNamara, D. S. (2012). Predicting second language writing proficiency: The roles of cohesion and linguistic sophistication. *Journal of Research in Reading*, 35(2), 115–135.
- Crossley, S. A., & McNamara, D. S. (2014). Does writing development equal writing quality? A computational investigation of syntactic complexity in L2 learners. *Journal of Second Language Writing*, 26, 66–79.
- Crossley, S. A., Salsbury, T., McNamara, D. S., & Jarvis, S. (2010). Predicting lexical proficiency in language learner texts using computational indices. *Language Testing*, 28(4), 561–580.
- Crossley, S. A., Yang, H. S., & McNamara, D. S. (2014). What's so simple about simplified texts? A computational and psycholinguistic investigation of text comprehension and text processing. *Reading in a Foreign Language*, 26(1), 92–113.
- Crowhurst, M. (1980). Syntactic complexity and teachers' quality ratings of narrations and arguments. *Research in the Teaching of English*, 14(3), 223–231.
- Ellis, R., & Yuan, F. (2004). The effects of planning on fluency, complexity, and accuracy in second language narrative writing. *Studies on Second Language Acquisition*, 26(1), 59–84.



- Engelhard, G., Gordon, B., & Gabrielson, S. (1992). The influences of mode of discourse, experiential demand, and gender on the quality of student writing. *Research in the Teaching of English*, 26(3), 315–336.
- Foltz, P. W. (2007). Discourse coherence and LSA. In T. K. Landauer, D. S. McNamara, S. Dennis, & W. Kintsch (Eds.), *Handbook of latent semantic analysis* (pp. 167–184). Mahwah, NJ: Lawrence Erlbaum.
- Fotos, S. S., (1991). The cloze test as an integrative measure of EFL proficiency: A substitute for essays on college entrance examinations? *Language Learning*, 41(3), 313–336.
- Frear, M. W., & Bitchener, J. (2015). The effects of cognitive task complexity on writing complexity. *Journal of Second Language Writing*, 30, 45–57.
- Gernsbacher, M. A. (1990). *Language comprehension as structure building*. Hillsdale, NJ: Lawrence Erlbaum.
- Gilabert, R. (2007). Effects of manipulating task complexity on self-repairs during L2 oral production. *International Review of Applied Linguistics in Language Teaching*, 45(3), 215–240.
- Ginsburg, H. P., & Opper, S. (1988). *Piaget's theory of intellectual development* (3rd ed.). Englewood Cliffs, NJ: Prentice-Hall.
- Grabe, W., & Kaplan, R. B. (1996). *Theory and practice of writing*. New York, NY: Longman.
- Graham, S., Berninger, V. W., & Fan, W. (2007). The structural relationship between writing attitude and writing achievement in first and third grade students. *Contemporary Educational Psychology*, 32(3), 516–536.
- Halliday, M. A. K. (1993). Some grammatical problems in scientific English. In M. A. K. Halliday & J. R. Martin (Eds.), *Writing science* (pp. 2–21). London, UK: The Falmer Press.
- Halliday, M. A. K., & Matthiessen, C. (1999). *Construing experience through meaning: A language-based approach to cognition*. London, UK: Cassell.
- Haswell, R. H. (2000). Documenting improvement in college writing: A longitudinal approach. *Written Communication*, 17(3), 307–352.
- Hayes, J. R. (1996). A new framework for understanding cognition and affect in writing. In C. M. Levy & S. Randall (Eds.), *The science of writing: Theories, methods, individual differences, and applications* (pp. 1–27). Mahwah, NJ: Erlbaum.
- Hayes, J. R., & Chenoweth, N. A. (2006). Is working memory involved in the transcribing and editing of texts? *Written Communication*, 23(2), 135–149.



- Hayes, J. R., & Flower, L. S. (1980). Identifying the organization of writing processes. In L. W. Gregg & E. R. Steinberg (Eds.), *Cognitive processes in writing* (pp. 3–30). Hillsdale, NJ: Erlbaum.
- Hickmann, M. (2003). *Children's discourse: Person, space, and time across languages*. Cambridge, UK: Cambridge University Press.
- Hinkel, E. (2002). *Second language writers' text: Linguistic and rhetorical features*. Mahwah, NJ: Lawrence Erlbaum.
- Hinofotis, F. B. (1980). Cloze as an alternative method of ESL placement and proficiency testing. In J. W. Oller, Jr., & K. Perkins (Eds.), *Research in language testing* (pp. 121–128). Rowley, MA: Newbury House.
- Hong, H., & Cao, F. (2014). Interactional metadiscourse in young EFL learner writing: A corpus-based study. *Interactional Journal of Corpus Linguistics*, 19(2), 201–224.
- Housen, A., Kuiken, F., & Vedder, I. (2012). Complexity, accuracy and fluency: Definitions, measurement and research. In A. Housen, F. Kuiken, & I. Vedder (Eds.), *Dimensions of L2 performance and proficiency: Investigating complexity, accuracy and fluency in SLA* (pp. 21–46). Amsterdam, The Netherlands/Philadelphia, PA: John Benjamins.
- Huot, B. (1990). Literature of direct writing assessment: Major concerns and prevailing trends. *Review of Educational Research*, 60(2), 237–263.
- Hyland, K. (2005). Stance and engagement: A model of interaction in academic discourse. *Discourse Studies*, 7(2), 173–192.
- Hyland, K. (2008). Disciplinary voices: Interactions in research writing. *English Text Construction*, 1(1), 5–22.
- Institute of International Education (IIE). (2016). *Open doors 2016*. Retrieved from <http://www.iie.org/Research-and-Publications/Open-Doors/Data/Fast-Facts#.WKDq0rYrJo4>
- Ishikawa, T. (2007). The effect of manipulating task complexity along the [+/- Here- and-Now] dimension of L2 written narrative discourse. In G. M. M. del Pilar (Ed.), *Investigating tasks in formal language learning* (pp. 136–156). Clevedon, UK: Multilingual Matters.
- Jackson, D. O., & Suethanapornkul, S. (2013). The cognition hypothesis: A synthesis and meta-analysis of research on second language task complexity. *Language Learning*, 63(2), 330–367.
- Jarvis, S., Grant, L., Bikowski, D., & Ferris, D. (2003). Exploring multiple profiles of highly rated learner compositions. *Journal of Second Language Writing*, 12(4), 377–403.



- Jeffery, J. V. (2009). Construct of writing proficiency in U.S. state and national writing assessments: Exploring variability. *Assessing Writing*, 14(1), 3–24.
- Jeon, M. (2009). Globalization and native English speakers in English programme in Korea (EPIK). *Language, Culture and Curriculum*, 22(3), 231–243.
- Jeong, H. (2017). Narrative and expository genre effects on students, raters, and performance criteria. *Assessing Writing*, 31, 113–125.
- Johansson, R., Wengelin, Å., Johansson, V., & Holmqvist K., (2010). Looking at the keyboard or the monitor: Relationship with text production processes. *Reading and Writing*, 23(7), 835–851.
- Johns, A. M. (1995). Teaching classroom and authentic genres: Initiating students into academic cultures and discourses. In D. Belcher & G. Braine (Eds.), *Academic writing in a second language: Essays on research and pedagogy* (pp. 277–293). Norwood, NJ: Ablex.
- Johnson, M. D., Mercado, L., & Acevedo, A., (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.
- Kang, J. Y. (2005). Written narratives as an index of L2 competence in Korean EFL learners. *Journal of Second Language Writing*, 14(4), 259–279.
- Kegley, P. H. (1986). The effect of mode discourse on student writing performance: Implications for policy. *Educational Evaluation and Policy Analysis*, 8(2), 147–154.
- Kellogg, R. T. (1996). A model of working memory in writing. In C. M. Levy & S. Ransdell (Eds.), *The science of writing: Theories, methods, individual differences and applications* (pp. 57–72). Mahwah, NJ: Lawrence Erlbaum.
- Kikuchi, K. (2006). Perspectives: Revisiting English entrance examinations at Japanese universities after a decade. *JALT Journal*, 28(1), 77–96.
- Klein, D., & Manning, C. D. (2003). Accurate unlexicalized parsing. *Proceedings of the 41st Meeting of the Association for Computational Linguistics*, 1, 423–430.
- Knudson, R. E. (1995). Writing experiences, attitudes, and achievement of first to sixth graders. *Journal of Educational Research*, 89(2), 90–97.
- Kormos, J. (2011). Task complexity and linguistic and discourse features of narrative writing performance. *Journal of Second Language Writing*, 20(2), 148–161.
- Kormos, J. (2014). Differences across modalities of performance: An investigation of linguistic and discourse complexity in narrative tasks. In H. Byrnes & R. M. Manchón (Eds.), *Task-based language learning: Insights from and for L2 writing* (pp. 193–216). Amsterdam,



The Netherlands: John Benjamins.

- Kormos, J., & Trebits, A. (2012). The role of task complexity, modality, and aptitude in narrative task performance. *Language Learning*, 62(2), 439–472.
- Kuiken, F., Mos, M., & Vedder, I. (2005). Cognitive task complexity and second language writing performance. In S. Foster-Cohen, M.P. García Mayo, & J. Cenoz (Eds.), *Eurosla Yearbook* (Vol. 5) (pp. 195–222). Amsterdam, The Netherlands: John Benjamins.
- Kuiken, F., & Vedder, I. (2007). Task complexity and measures of linguistic performance in L2 writing. *International Review of Applied Linguistics*, 45(3), 261–284.
- Kuiken, F., & Vedder, I. (2008). Cognitive task complexity and written output in Italian and French as a foreign language. *Journal of Second Language Writing*, 17(1), 48–60.
- Landauer, T. K., Foltz, P. W., & Laham, D. (1998). An introduction to latent semantic analysis. *Discourse Processes*, 25(2-3), 259–284.
- Laufer, B., & Nation, P. (1995). Vocabulary size and use: Lexical richness in L2 written production. *Applied Linguistics*, 16(3), 307–332.
- Leijten, M., & Van Waes, L. (2013). Keystroke logging in writing research: Using Inputlog to analyze and visualize writing processes. *Written Communication*, 30(3), 358–392.
- Lo, J., & Hyland, F. (2007). Enhancing students' engagement and motivation in writing: The case of primary students in Hong Kong. *Journal of Second Language Writing*, 16(4), 219–237.
- Long, M. (2015). *Second language acquisition and task-based language teaching*. Oxford, UK: John Wiley & Sons.
- Lu, X. (2010). Automatic measurement of syntactic complexity in child language acquisition. *International Journal of Corpus Linguistics*, 14(1), 3–28.
- Lu, X. (2011). A corpus-based evaluation of syntactic complexity measures as indices of college-level ESL writers' language development. *TESOL Quarterly*, 45(1), 36–62.
- Malicka, A., & Levkina, M. (2012). Measuring task complexity: Does L2 proficiency matter? In A. Shehadeh & C. Coombe (Eds.), *Task-based language teaching in foreign language contexts: Research and implementation* (pp. 43–66). Amsterdam, The Netherlands: John Benjamins.
- Malvern, D. D., Richards, B., Chipere, N., & Durán, P. (2004). *Lexical diversity and language development: Quantification and assessment*. Basingstoke, UK: Palgrave Macmillan.



- Manchón, R. M., & Roca de Larios, J. (2007). On the temporal nature of planning in L1 and L2 composing: A study of foreign language writers. *Language Learning*, 57(4), 549–593.
- Matsuda, P. K. (2015). Identity in written discourse. *Annual Review of Applied Linguistics*, 35, 140–159.
- Mazgutova, D., & Kormos, J. (2015). Syntactic and lexical development in an intensive English for Academic Purposes programme. *Journal of Second Language Writing*, 29, 3–15.
- McCarthy, P. M., & Jarvis, S. (2010). MTL-D, vocd-D, and HD-D: A validation study of sophisticated approaches to lexical diversity assessment. *Behavior Research Methods*, 42(2), 381–392.
- McCutchen, D., & Perfetti, C. A. (1982). Coherence and connectedness in the development of discourse production. *Text-Interdisciplinary Journal for the Study of Discourse*, 2(1-3), 113–140.
- McDonough, K., & Trofimovich, P. (2011). *Using priming methods in second language research*. New York, NY: Routledge.
- McNamara, D. S., Crossley, S. A., & McCarthy, P. M. (2010). Linguistic features of writing quality. *Written Communication*, 27(1), 57–86.
- McNamara, D. S., Graesser, A. C., McCarthy, P., & Cai, Z. (2014). *Automated evaluation of text and discourse with Coh-Metrix*. Cambridge, UK: Cambridge University Press.
- Mei, W. S. (2006). Creating a contrastive rhetorical stance: Investigating the strategy of problematization in students' argumentation. *RELC*, 37(3), 329–353.
- Melendy, G. A. (2008). Motivating writers: The power of choice. *The Asian EFL Journal*, 10(3), 187–198.
- Norris, J., & Ortega, L. (2009). Towards an organic approach to investigating CAF in instructed SLA: The case of complexity. *Applied Linguistics*, 30(4), 555–578.
- Ojima, M. (2006). Concept mapping as pre-task planning: A case study of three Japanese ESL writers. *System*, 34(4), 566–585.
- Olinghouse, N. G., & Graham, S. (2009). The relationship between the discourse knowledge and the writing performance of elementary-grade students. *Journal of Educational Psychology*, 101(1), 37–50.
- Oller, J. W., & Conrad, C. A. (1971). The cloze technique and ESL proficiency. *Language Learning*, 21(2), 185–195.
- Ong, J. (2013). Discovery of ideas in second language writing task environment. *System*, 41(3),



529–542.

- Ong, J. (2014). How do planning time and task conditions affect metacognitive processes of L2 writers? *Journal of Second Language Writing, 23*, 17–30.
- Ong, J., & Zhang L. J. (2010). Effects of task complexity on the fluency and lexical complexity in EFL students' argumentative writing. *Journal of Second Language Writing, 19*(4), 218–233.
- Ortega, L. (2003). Syntactic complexity measures and their relationship to L2 proficiency: A research synthesis of college-level L2 writing. *Applied Linguistics, 24*(4), 492–518.
- Parkinson, J., & Musgrave, J. (2014). Development of noun phrase complexity in the writing of English for Academic Purposes students. *Journal of English for Academic Purposes, 14*, 48–59.
- Peterson, C., & McCabe, A. (1983). *Developmental psycholinguistics: Three ways of looking at a child's narrative*. New York, NY: Plenum.
- Plakans, L. (2010). Independent vs. integrated writing tasks: A comparison of task representation. *TESOL Quarterly, 44*(1), 185–194.
- Plakans, L., & Gebril, A. (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.
- Plonsky, L., & Kim, Y. (2016). Task-based learner production: A substantive and methodological review. *Annual Review of Applied Linguistics, 36*, 73–97.
- Plonsky, L., & Oswald, F. L. (2017). Multiple regression as a flexible alternative to ANOVA in L2 research. *Studies in Second Language Acquisition, 39*(3), 579–592.
- Polio, C., & Yoon, H. (2016). Task and genre differences in L2 writing research. Invited colloquium (Colloquium title: Researching written task complexity in diverse contexts organized by Lawrence Zhang) presented at *American Association for Applied Linguistics (AAAL) 2016*, Orlando, FL.
- Polio, C., & Yoon, H. (2018). The reliability and validity of automated tools for examining variation in syntactic complexity across genres. *International Journal of Applied Linguistics, 28*(1), 165–188.
- Qin, J., & Karabacak, E. (2010). The analysis of Toulmin elements in Chinese EFL university argumentative writing. *System, 38*(3), 444–456.



- Qin, W., & Uccelli, P. (2016). Same language, different functions: A cross-genre analysis of Chinese EFL learners' writing performance. *Journal of Second Language Writing*, 33, 3–17.
- Quinlan, T., Loncke, M., Leijten, M., & Van Waes, L. (2012). Coordinating the cognitive processes of writing: The role of the Monitor. *Written Communication*, 29(3), 345–368.
- Ravid, D. (2005). Emergence of linguistic complexity in later language development: Evidence from expository text construction. In D. Ravid & H. B. Shyldkrot (Eds.), *Perspectives on language and language development: Essays in honor of Ruth A. Berman* (pp. 337–356). London, UK: Kluwer Academic.
- Révész, A. (2009). Task complexity, focus on form, and second language development. *Studies in Second Language Acquisition*, 31(3), 437–470.
- Révész, A. (2014). Towards a fuller assessment of cognitive models of task-based learning: Investigating task-generated cognitive demands and processes. *Applied Linguistics*, 35(1), 87–92.
- Révész, A., Kourтали, N., & Mazgutova, D. (2017). Effects of task complexity on L2 writing behaviors and linguistic complexity. *Language Learning*, 67(1), 208–241.
- Révész, A., Michel, M., & Gilabert, R. (2016). Measuring cognitive task demands using dual-task methodology, subjective self-ratings, and expert judgments: A validation study. *Studies in Second Language Acquisition*, 38(4), 703–737.
- Révész, A., Sachs, R., & Hama, M. (2014). The effects of task complexity and input frequency on the acquisition of the past counterfactual construction through recasts. *Language Learning*, 64(3), 615–650.
- Rezaei, A. R., & Lovorn, M. (2010). Reliability and validity of rubrics for assessment through writing. *Assessing Writing*, 15(1), 18–39.
- Robinson, P. (2001a). Task complexity, task difficulty, and task production: Exploring interactions in a componential framework. *Applied Linguistics*, 22(1), 27–57.
- Robinson, P. (2001b). Task complexity, cognitive resources, and syllabus design: A triadic framework for examining task influences on SLA. In P. Robinson (Ed.), *Cognition and second language instruction* (pp. 287–318). Cambridge, UK: Cambridge University Press.
- Robinson, P. (2003). The cognition hypothesis of adult, task-based language learning. *Second Language Studies*, 21(2), 45–107.
- Robinson, P. (2005). Cognitive complexity and task sequencing: Studies in a componential framework for second language task design. *International Review of Applied Linguistics*, 43(1), 1–32.



- Robinson, P. (2007). Task complexity, theory of mind, and intentional reasoning: Effects on L2 speech production, interaction, uptake and perceptions of task difficulty. *International Review of Applied Linguistics*, 45(3), 193–213.
- Robinson, P. (2010). Situating and distributing cognition across task demands: The SSARC model of pedagogic task sequencing. In M. Putz & L. Sicola (Eds.), *Cognitive processing in second language acquisition: Inside the learner's mind* (pp. 243–268). Amsterdam, The Netherlands: John Benjamins.
- Robinson, P. (2011). Task-based language learning: A review of issues. *Language Learning*, 61 (Suppl. 1), 1–36.
- Ruiz-Funes, M. (2014). Task complexity and linguistic performance in advanced college-level foreign language writing. In H. Byrnes & R. M. Manchón (Eds.), *Task-based language learning: Insights from and for L2 writing* (pp. 163–192). Amsterdam, The Netherlands: John Benjamins.
- Ruiz-Funes, M. (2015). Exploring the potential of second/foreign language writing for language learning: The effects of task factors and learner variables. *Journal of Second Language Writing*, 28, 1–19.
- Sakamoto, M. (2012). Moving towards effective English language teaching in Japan: Issues and challenges. *Journal of Multilingual and Multicultural Development*, 33(4), 409–420.
- Shim, R. J., & Baik, M. J. (2004). English education in South Korea. In W. K. Ho & R. Y. L. Wong (Eds.), *English language teaching in East Asia today* (pp. 241–261). Singapore: Eastern Universities Press.
- Skehan, P. (1998). *A cognitive approach to language learning*. Oxford, UK: Oxford University Press.
- Skehan, P. (2009). Modelling second language performance: Integrating complexity, accuracy, fluency and lexis. *Applied Linguistics*, 30(4), 510–532.
- Skehan, P., & Foster, P. (1997). The influence of planning and post-task activities on accuracy and complexity in task based learning. *Language Teaching Research*, 1(3), 185–211.
- Skehan, P., & Foster, P. (2001). Cognition and tasks. In P. Robinson (Ed.), *Cognition and second language instruction* (pp. 183–205). Cambridge, England: Cambridge University Press.
- Slobin, D. (2004). The many ways to search for a frog: Linguistic typology and the expression of motion events. In S. Strömquist & L. Verhoeven (Eds.), *Relating events in narrative, volume 2: Typological and contextual perspectives* (pp. 219–257). Mahwah, NJ: Lawrence Erlbaum.
- Smith, W. L., Hull, G. A., Land, R. E., Moore, M. T., Ball, C., Dunham, D. E., Hickey, L. S., &



- Ruzich, C. W. (1985). Some effects of varying the structure of a topic on college students' writing. *Written Communication*, 2(1), 73–89.
- Talmy, L. (1985). Lexicalization patterns: Semantic structure in lexical forms. In T. Shopen (Ed.), *Language typology and lexical description, volume 3: Grammatical categories and the lexicon* (pp. 36–149). Cambridge, England: Cambridge University Press.
- Talmy, L. (2000). *Toward a cognitive semantics, volume 1: Concept structuring systems*. Cambridge: MIT Press.
- Tavakoli, P. (2014). Storyline complexity and syntactic complexity in writing and speaking tasks. In H. Byrnes & R. M. Manchón (Eds.), *Task-based language learning: Insights from and for L2 writing* (pp. 217–236). Amsterdam, The Netherlands: John Benjamins.
- Tedick, D. J. (1990). ESL writing assessment: Subject-matter knowledge and its impact on performance. *English for Specific Purposes*, 9(2), 123–143.
- Toutanova, K., Klein, D., Manning, C., & Singer, Y. (2003). Feature-Rich Part-of-Speech Tagging with a Cyclic Dependency Network. *Proceedings of HLT-NAACL 2003*, 252–259.
- Tremblay, A. (2011). Proficiency assessment standards in second language acquisition research: “Clozing” the gap. *Studies in Second Language Acquisition*, 33(3), 339–372.
- van Dijk, T. A., & Kintsch, W. (1983). *Strategies of discourse comprehension*. New York, NY: Academic Press.
- Verspoor, M., Lowie, W., & van Dijk, M. (2008). Variability in second language development from a dynamic systems perspective. *The Modern Language Journal*, 92(2), 214–231.
- Watanabe, Y. (1996). Does grammar translation come from the entrance examination? Preliminary findings from classroom-based research. *Language Testing*, 13(3), 318–333.
- Way, P., Joiner, E. G., & Seaman, M. (2000). Writing in the secondary foreign language classroom: The effects of prompts and tasks on novice learners of French. *The Modern Language Journal*, 84(2), 171–184.
- Wengelin, Å., Torrance, M., Holmqvist, K., Simpson, S., Galbraith, D., Johansson, V., & Johansson, R. (2009). Combined eyetracking and keystroke-logging methods for studying cognitive processes in text production. *Behavior Research Methods*, 41(2), 337–351.
- Wolfe-Quintero, K., Inagaki, S., & Kim, H. (1998). *Second language development in writing: Measures of fluency, accuracy, and complexity*. Second Language Teaching & Curriculum Center, University of Hawaii at Manoa.
- Wu, X. (2003). Intrinsic motivation and young language learners: The impact of the classroom



- environment. *System*, 31(4), 501–517.
- Yang, W. (2014). *Mapping the relationships among the cognitive complexity of independent writing tasks, L2 writing quality, and complexity, accuracy and fluency of L2 writing* (Unpublished Doctoral Dissertation). Georgia State University, Atlanta, Georgia. Retrieved from: http://scholarworks.gsu.edu/alesl_diss/29
- Yang, W. Lu, X., & Weigle, S. C. (2015). Different topics, different discourse: Relationships among writing topic, measures of syntactic complexity, and judgments of writing quality. *Journal of Second Language Writing*, 28, 53–67.
- Yang, W., & Sun, Y. (2012). The use of cohesive devices in argumentative writing by Chinese EFL learners at different proficiency levels. *Linguistics and Education*, 23(1), 31–48.
- Yoon, H. (2017). Textual voice elements and voice strength in EFL argumentative writing. *Assessing Writing*, 32, 72–84.
- Yoon, H., & Polio, C. (2017). ESL students' linguistic development in two written genres. *TESOL Quarterly*, 51(2), 275–301.
- Yuan, F., & Ellis, R. (2003). The effects of pre-task planning and on-line planning on fluency, complexity and accuracy in L2 monologic oral production. *Applied Linguistics*, 24(1), 1–27.
- Zhang, L. J. (2013). Second language writing as and for second language learning. *Journal of Second Language Writing*, 22(4), 446–447.
- Zhao, C. G. (2012). Measuring authorial voice strength in L2 argumentative writing: The development and validation of an analytic rubric. *Language Testing*, 30(2), 201–230.
- Zhao, C. G., & Llosa, L. (2008). Voice in high-stakes L1 academic writing assessment: Implications for L2 writing instruction. *Assessing Writing*, 13(3), 153–170.
- Zimmerman, B. J., & Bandura, A. (1994). Impact of self-regulatory influences on writing course attainment. *American Educational Research Journal*, 31(4), 845–862.