Dissertation Title:

Constructing knowledge in SLA: The role of timing of form-focused intervention

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Summary:

In an effort to identify an optimal timing for form-oriented treatment, this dissertation reports on the impact of different timings of form-focused intervention. Applying the theories of attentional control (Cowan, *et al.*, 2005; LaBerge, 1995), the study further attempts to shed light on the role of preparatory attentional control at the initial stage of form-encoding.

A reading task served as a framework for exploring different timings of treatment with 58 EFL students in Japan. The informants were classified into three groups: one group receiving explicit treatment before the task, another during, and a control group receiving no treatment. Participants took pretests and posttests immediately before and after the task in a single class session. These tests examined comprehension of two epistemic meanings of 'must' in two individual forms. Working with these task-essential forms, each informant recorded real-time reflections reporting rationales for their selections from different form options in the task. The participants' rationales revealed that contextualized reflections are strongly associated with higher accuracy levels in choosing between alternate forms. Decontextualized rationales were associated with incorrect selections of forms at a high level of probability. Group difference was highly significant for one form and significant for the other form in the order of Control < Pre-emptive < Delayed group. Effect sizes were large (e.g. 2.00) for the delayed group which outperformed the pre-emptive group. The pattern of the results replicated three prior studies with 286 participants.

The overall results present a promising role for delayed treatment reactive to raised preparatory attention. The outcome further confirms that it is through making connections between form and meaning within current language use that learners become successful in language comprehension.

References

- Adamo, M., Puna, C., Pratta, J., & Ferbera, S. (2008). Your divided attention, please! The maintenance of multiple attentional control sets over distinct regions in space. *Cognition*, 107(1), 295 303.
- Adams, T. W. (1998). *Gesture in foreigner talk*. Philadelphia, PA: University of Pennsylvania.
- Alais, D., Morrone, C., & Burr, D. (2006). Separate attentional resources for vision and audition. *Biological sciences*, 7, 1339-45.
- Alanen, R. (1995). Input enhancement and rule presentation in second language acquisition. In R. Schmidt (Ed), *Attention and awareness in foreign language learning* (pp. 259-302). Honolulu, HI: University of Hawai'i Press.
- Alderson, J. C. (1984). Reading in a foreign language: reading problem or language problem? In J. C. Alderson and A. H. Urquhart (Eds.), *Reading in a foreign language* (pp. 1-24). London: Longman.
- Alderson, J. C. (2005). Diagnosing foreign language proficiency: The interface between learning and assessment. London: Continuum.
- Alderson, J. C., Clapham. C., & Wall, D. (1995). Language test construction and evaluation. Cambridge: Cambridge University Press.
- Alderson, J. C., Krahnke, K. J., & Stansfield, C. W., (Eds.). (1987). Reviews of English language proficiency tests. Washington, DC: TESOL.
- Allwright, R. (1975). Problems in the study of the language teacher's treatment of learner error. In M. Burt & H. Dulay (Eds.), *On TESOL '75: New direction in second language learning, teaching and bilingual education* (pp. 96-109). Washington, DC: TESOL.
- Allwright, R. (1979). Language learning through communication practice. In C. J. Brumfit & K. Johnson (Eds.), *The communicative approach to language teaching* (pp. 167-82). Oxford: Oxford University Press.
- Allwright, R., & Bailey, K. M. (1991). Focus on the language classroom: an introduction to classroom research for language teachers. Cambridge: Cambridge University Press.
- Ammar, A., & Spada, N. (2007). One size fits all?: Recasts, prompts, and L2 learning. *Studies in Second Language Acquisition*, 28(4), 543-74.
- Andersen, R. W. (1991). Developmental sequences: The emergence of aspect marking in second language acquisition. In C. A. Ferguson & T. Huebner (Eds.), *Crosscurrents in second language acquisition and linguistic theories* (pp. 305-24). Amsterdam: Benjamins.

- Andersen, R. W., & Shirai, Y. (1994). Primacy of aspect in first and second language acquisition: The pidgin/creole connection. In W. C. Ritchie & T. K. Bhatia (Eds.), *Handbook of second language acquisition* (pp. 527-70). San Diego, CA: Academic Press.
- Anderson, J. R. (1982). Acquisition of cognitive skill. *Psychological Review*, 89, 369-406.
- Anderson, J. R. (1983). *The architecture of cognition*. Cambridge, MA: Harvard University Press.
- Austin, J. L. (1962). How to do things with words. Oxford: Oxford University Press.
- Baddeley, A. D. (1986). Working memory. Oxford: Clarendon Press.
- Baddeley, A. D. (1990). *Human memory: Theory and practice*. London: Lawrence Erlbaum.
- Baddeley, A. D. (1995). Working memory. In M. S. Gazzaniga (Ed.), *The cognitive neuroscience* (pp. 292-304). Cambridge, MA: MIT Press.
- Baddeley, A. D. (2002). Is working memory still working? *European Psychologist*, 7(2), 85-97. Reprinted from *American Psychologist*, 56 (11), 851-64.
- Baddeley, A. D., Baddeley, H., Wilcock, G. K., & Bucks, R. (2001). Attentional control in Alzheimer's disease. *Brain*, *124*, 1492-508.
- Baddeley, A. D., & Logie, R. H. (1999). Working memory: The multiple-component model. In A. Miyake & P. Shah (Eds.), *Models of working memory:*Mechanisms of active maintenance and executive control (pp. 28-61).

 Cambridge: Cambridge University Press.
- Badre, D. (2008). Cognitive control, hierarchy, and the rostro-caudal axis of the prefrontal cortex. *Trends in Cognitive Science*, 12(5), 193-200
- Baer, R. A. (2003). Mindfulness training as a clinical intervention: A conceptual and empirical review. *Clinical Psychology: Science and Practice*, 10: 125-43.
- Baker, N. D., & Nelson, K. E. (1984). Recasting and related conversational techniques for triggering syntactic advances by young children. *First Language*, *5*, 3-22.
- Bates, E., & MacWhinney, B. (1981). Second language acquisition from a functionalist perspective: Pragmatic, semantic and perceptual strategies. In H. Winitz (Ed.), *Annals of the New York Academy of Sciences* (pp. 190-214). New York: New York Academy of Sciences.
- Baugh, F. (2002). Correcting effect sizes for score reliability: A reminder that measurement and substantive issues are linked inextricably. *Educational and Psychological Measurement*, 62, 2, 254-63.

- Beck, M., & Eubank, L. (1991). Acquisition theory and experimental design: A critique of Tomasello and Herron. *Studies in Second Language Acquisition*, 13(1), 73-76.
- Benati, A. (2004). The effects of structured input activities and explicit information on the acquisition of the Italian future tense. In B. VanPatten (Ed.), *Processing instruction: Theory, research, and commentary* (pp. 207-25). Mahwah, NJ: Erlbaum.
- Beretta, A., & Davies, A. (1985). Evaluation of the Bangalore project. *ELT Journal*. 39(2), 121-27.
- Bialystok, E. (1978). A theoretical model of second language learning. *Language Learning*, 28, 69-83.
- Bialystok, E. (1994). Representation and ways of knowing: Three issues in second language acquisition. In N. C. Ellis (Ed.), *Implicit and explicit leaning of languages* (pp. 549-69). London: Academic Press Inc.
- Birdsong, D. (1992). Ultimate attainment in second language acquisition. *Language*, 68, 706-55.
- Birdsong, D. (2006). Age and second language acquisition and processing: A selective overview. *Language Learning*, *56*, 9-49.
- Bohannon, J. N. III., & Stanowicz, L. (1988). The issue of negative evidence: Adult responses to children's errors. *Developmental Psychology*, 24(5), 684-89.
- Breen, M. P. (1987). Learner contributions to task design. In C. N. Candlin & D. Murphy (Eds.), *Language learning tasks. Lancaster practical papers in English language education, Vol. 7*, (pp. 23-46). Englewood Cliffs, NJ: Prentice Hall.
- Breen, M. P., & Candlin, C. N. (1980). The essentials of a communicative curriculum in language teaching. *Applied Linguistics*, 1(2), 89-112.
- Brown, R. (1991). Group work, task difference, and second language acquisition. *Applied Linguistics*, 11, 1-12.
- Brumfit, C. J. (1979). 'Communicative' language teaching: An educational perspective. In C. J. Brumfit & K. Johnson (Eds.), *The communicative approach to language teaching* (pp. 183-91). Oxford: Oxford University Press.
- Brumfit, C. J. (1984a). *Communicative methodology in language teaching*. Cambridge: Cambridge University Press.
- Brumfit, C. J. (1984b). The Bangalore procedural syllabus. *ELT Journal*. 38(4), 233-41.

- Bybee, J. L. (1985). *Morphology: A study of the relation between meaning and form.* Amsterdam: John Benjamins.
- Bybee, J. L. (2008). Usage-based grammar and second language acquisition. In P. Robinson & N. C. Ellis (Eds.), *Handbook of cognitive linguistics and second language acquisition* (pp. 216-37). New York: Routledge.
- Bybee, J. L., & Fleischman, S. (1995). (Eds.). *Modality in grammar and discourse*. Philadelphia, PA: John Benjamins.
- Bybee, J. L., Perkins, R. D., & Pagliuca. W. (1994). *The evolution of grammar: Tense, aspect and modality in the languages of the world.* Chicago: University of Chicago Press.
- Bygate, M. (2001). Effects of task repetition on the structure and control of oral language. In M. Bygate, P. Skehan & M. Swain (Eds.). *Researching pedagogic tasks second language learning, teaching and testing* (pp. 23-48), Harlow: Pearson Education Limited.
- Bygate, M., & Samuda, V. (2005). Integrative planning through the use of task-repetition. In R. Ellis (Ed.), *Planning and task performance in a second language* (pp. 37–76). Philadelphia, PA: John Benjamins.
- Bygate, M., Skehan, P., & Swain, M. (2001a). Introduction. In M. Bygate, P. Skehan & M. Swain (Eds.), *Researching pedagogic tasks: Second language learning, teaching and testing* (pp. 1-20). Harlow: Pearson Education Limited.
- Bygate, M., Skehan, P., & Swain, M. (2001b). (Eds.). *Researching pedagogic tasks:* Second language learning, teaching and testing. Harlow: Pearson Education Limited.
- Cadierno, T. (1995). Formal instruction from a processing perspective: An investigation into the Spanish past tense. *Modern Language Journal*, 79, 179-93.
- Candlin, C. N. (1979). The status of pedagogical grammars. In C. J. Brumfit & K. Johnson (Eds.), *The communicative approach to language teaching* (pp. 72-90). Oxford: Oxford University Press.
- Candlin, C. N. (1987). Towards task-based learning. In C. N. Candlin & D. Murphy (Eds.), *Lancaster practical papers in English language education. Vol. 7* (pp. 5-22). Englewood Cliffs, NJ: Prentice Hall.
- Carpenter, H., Jeon, K. S., MacGregor, G., & Mackey, A. (2006). Learners' interpretations of recasts. *Studies in Second Language Acquisition*, 28(2), 209-36.
- Carroll, S., & Swain, M. (1993). Explicit and implicit negative feedback: An empirical study of linguistic generalizations. *Studies in second language acquisition*, 15(3), 357-86.

- Caton, C. (1966). On the general structure of the epistemic qualification of things said in English. *Foundations of Language 2*, 37-66.
- Celce-Murcia, M., & Larsen-Freeman, D. (1999). *The grammar book: An ESL/EFL teacher's course*. Boston, MA: Heinle and Heinle Publishing Company.
- Chaudron, C. (1977). A descriptive model of discourse in the corrective treatment of learners' errors. *Language Leaning*, 27, 29-46.
- Chaudron, C. (1987). The role of error correction in second language teaching. In B. K. Das, (Ed.), *Patterns of classroom interaction in Southeast Asia* (pp. 17-50). Singapore: SEAMEO Regional Language Centre.
- Chaudron, C. (1988). Second language classrooms: Research on teaching and learning. Cambridge: Cambridge University Press.
- Coates, J. (1983). The semantics of modal auxiliaries. London: Croom Helm.
- Comrie, B. (1976). *Aspect. An introduction to the study of verbal aspect and related problems.* Cambridge: Cambridge University Press.
- Conover, W. J. (1999). Practical nonparametric statistics. NJ: Wiley.
- Conway, A. R. A., Jarrold, C., Kane, M. J., Miyake, A., & Towse, J. N. (Eds.). (2007). *Variation in working memory*. New York: Oxford University Press.
- Corbetta, M., Miezin, F., Dobmeyer, S., Shulman, G., & Petersen, S. (1991). Selective and divided attention during visual discriminations of shape, color, and speed: Functional anatomy by positron emission tomography. *The Journal of Neuroscience* 11, 2383-402.
- Cowan, N. (1997). Attention and memory: An integrated framework. Oxford: Oxford University Press.
- Cowan, N. (2001). Processing limits of selective attention and working memory: Potential implications for interpreting. *Interpreting*, *5*, 117-46.
- Cowan, N. (in press). Working memory. In N. J. Salkind (Ed.), *Encyclopedia of educational psychology*. London: Sage.
- Cowan, N., Elliott, E. M., Saults, J. S., Morey, C. C., Mattox, S., Hismjatullina, A., & Conway, A. R. A. (2005). On the capacity of attention: Its estimation and its role in working memory and cognitive aptitudes. *Cognitive Psychology*, *51*(1), 42-100.
- Cowan, N., Fristoe, N. M., Elliott, E. M., Brunner, R. P., & Saults, J. S. (2006). Scope of attention, control of attention, and intelligence in children and adults. *Memory & cognition 34*(8), 1754-768.

- Cowan, N., Johnson, T. D., & Saults, J. S. (2005). Capacity limits in list item recognition: Evidence from proactive interference. *Memory*. *13*, 293-99.
- Cowan, N., Morey, C. C., Chen, Z., & Bunting, M. F. (in press). What do estimates of working memory capacity tell us? In N. Osaka, R. Logie & M. D'Esposito (Eds.), *Working memory: Behavioral & neural correlates*. Oxford: Oxford University Press.
- Cowan, N., Saults, J. S., & Nugent, L. (2001). The ravages of absolute and relative amounts of time on memory. In H. L. Roediger III, J. S. Nairne, I. Neath & A. Surprenant (Eds.), *The nature of remembering: Essays in honor of Robert G. Crowder* (pp. 315-30). Washington, DC: American Psychological Association.
- Crookes, G., & Gass, S. (1993). (Eds.). *Tasks and language learning: Integrating theory and practice*. Clevedon: Multilingual Matters.
- Cruse, A. (2004). *Meaning in language: An introduction to semantics and pragmatics*. Oxford: Oxford University Press.
- Day, R. R. (1986). (Ed.). *Talking to learn: Conversation in second language acquisition*. Rowley, MA: Newbury House.
- Day, R. R., Chenoweth, N., Chun, A., & Luppescu. (1984). Corrective feedback in native-nonnative discourse. *Language Learning*, *34*, 19-45.
- de Bot, K. (1992). A Bilingual processing model: Levelt's 'Speaking' model adapted. *Applied Linguistics*, 13, 1-24
- de Bot, K. (1998). The psycholinguistics of language loss. In G. Extra & L. Verhoeven (Eds.), *Bilingualism and migration* (pp. 345-61). Berlin: Mouton de Gruyter.
- Decoo, W. (1996). The induction-deduction opposition: Ambiguities and complexities of the didactic reality. *IRAL*, *34*, 95-118.
- D'Esposito, M., Detre, J. A., Alsop, D. C., Shin, R. K., Atlas, S., & Grossman, M. (1995). The neural basis of the central executive system of working memory. *Nature*. *378*, 279 81.
- de Graaff, R. (1997). *Differential effects of explicit instruction*. The Hague: Holland Institute of Generative Linguistics.
- DeGroot, M. H. & Schervish, M. J. (2001). *Probability and statistics*. 3rd Edition. MA: Addison-Wesley Publishing Company.
- DeKeyser, R. M. (1997). Beyond explicit rule learning: Automatizing second language morphosyntax. *Studies in Second Language Acquisition 19*, 195-221.
- DeKeyser, R. M. (2001). Automaticity and automatization. In P. Robinson (Ed.), *Cognition and second language instruction* (pp. 125-51). Cambridge: Cambridge University Press.

- DeKeyser, R. M. (2003). Implicit and explicit learning. In C. Doughty & M. Long (Eds.), *Handbook of second language acquisition* (pp. 313-48). Oxford: Blackwell.
- DeKeyser, R. M. (2005). What makes second-language grammar difficult? A review of issues. *Language Learning* 55(1), 1-25.
- DeKeyser, R. M. (2007). (Ed.). Practicing in a second language: Perspectives from applied linguistics and cognitive psychology. Cambridge: Cambridge University Press.
- DeKeyser, R. M., Salaberry, R., Robinson., P., & Harrington, M., (2002). What gets processed in processing instruction? A commentary on Bill VanPatten's "Update." *Language Learning*, 52(4), 805-23.
- Dörnyei, Z. (2005). The psychology of the language learner: Individual differences in second language acquisition. Mahwah, NJ: Erlbaum.
- Doughty, C. (1991). Second language instruction does make a difference: Evidence from an empirical study of SL relativization. *Studies in Second Language Acquisition*, 13, 117-35.
- Doughty, C. (2001). Cognitive underpinnings of focus on form. In P. Robinson (Ed.), Cognition and second language instruction (pp. 206-57). Cambridge: Cambridge University Press.
- Doughty, C., & Varela, E. (1998). Communicative focus on form. In C. Doughty & J. Williams (Eds.), *Focus on form in classroom SLA* (pp. 114-38). Cambridge: Cambridge University Press.
- Doughty, C., & Williams, J. (1998). Pedagogical choices in focus on form. In C. Doughty & J. Williams (Eds.), *Focus on form in classroom second language acquisition* (pp. 197-261). Cambridge: Cambridge University Press.
- Duff, P. (1986). Another look at interlanguage talk: taking task to task. In R. R. Day (Ed.), *Talking to learn: Conversation in second language acquisition* (pp. 147-81). Rowley, MA: Newbury House.
- Duff, P. (1993). Tasks and interlanguage performance: An SLA perspective. In G. Crookes & S. Gass (Ed.), *Tasks and language learning: Integrating theory and practice* (pp. 57-95). Clevedon: Multilingual Matters.
- Egeth, H. E., & Yantis, S. (1997). Visual attention: Control, representation, and time course. *Annual Review of Psychology.* 48, 269-97.
- Ellis, N. C. (1994). Implicit and explicit language learning: An overview. In N. C. Ellis (Ed.), *Implicit and explicit leaning of languages* (pp. 1-31). London: Academic Press Inc.

- Ellis, N. C. (1996). Sequencing in SLA: Phonological memory, chunking, and points of order. *Studies in Second Language Acquisition*, *18*, 91-126.
- Ellis, N. C. (1999). Cognitive approaches to SLA. *Annual Review of Applied Linguistics*, 19, 22-42.
- Ellis, N. C. (2001). Memory for language. In P. Robinson (Ed.), *Cognition and second language instruction* (pp. 3-68). Cambridge: Cambridge University Press.
- Ellis, N. C. (2002). Frequency effects in language acquisition: A review with implications for theories of implicit and explicit language acquisition. *Studies in Second Language Acquisition*, 24, 143-88.
- Ellis, N. C. (2005). At the interface: Dynamic interactions of explicit and implicit language knowledge. *Studies in Second Language Acquisition*, 27, 305-52.
- Ellis, N. C. (2006). Selective attention and transfer phenomena in SLA: Salience, contingency, interference, overshadowing, blocking, and perceptual learning. *Applied Linguistics*, 27(2), 164-94.
- Ellis, N. C. (2008). Usage-based and form-focused language acquisition: The associative learning of constructions, learned attention, and the limited L2 endstate. In P. Robinson & N. C. Ellis (Eds.), *Handbook of cognitive linguistics and second language acquisition* (pp. 372-405). New York: Routledge.
- Ellis, R. (1994). *The study of second language acquisition*. Oxford: Oxford University Press.
- Ellis, R. (2001). Non-reciprocal tasks, comprehension and second language acquisition. In M. Bygate, P. Skehan & M. Swain (Eds.), *Researching pedagogic tasks:*Second language learning, teaching and testing (pp. 49-74). Harlow: Pearson Education Limited.
- Ellis, R. (2002). Investigating form-focused instruction. In R. Ellis (Ed.), *Form-focused instruction and second language learning* (pp. 1-46). Oxford: Blackwell.
- Ellis, R. (2003). *Task-based language learning and teaching*. Oxford: Oxford University Press.
- Ellis, R. (2005). Planning and task-based performance: Theory and research. In R. Ellis (Ed.), *Planning and task performance in a second language* (pp. 3–36). Philadelphia, PA: John Benjamins.
- Ellis, R., Basturkmen, H., & Loewen, S. (2001). Preemptive focus on form in the ESL classroom. *TESOL Quarterly*, *35*(3), 407-32.

- Ellis, R., Loewen, S., & Erlam, R. (2006). Implicit and explicit corrective feedback and the acquisition of L2 grammar. *Studies in Second Language Acquisition* 28, 339-68.
- Ellis, R., & Sheen, Y. (2006). Reexamining the role of recasts in second language acquisition. *Studies in Second Language Acquisition*, 28(4), 575-600.
- Engle, R. W. (1999). Working memory, short-term memory, and general fluid intelligence: a latent-variable approach. *PubMed*, *128*(3), 309-31.
- Engle, R. W., Cantor, J., & Carullo, J. J. (1992). Individual differences in working memory and comprehension: A test of four hypotheses. *Journal of Experimental Psychology: Leaning, Memory, and Cognition, 18*, 972-92.
- Engle, R. W., Kane, M. J., & Tuholski, S. W. (1999). Individual differences in working memory capacity and what they tell us about controlled attention, general fluid intelligence, and functions of the prefrontal cortex. In A. Miyake & P. Shah (Eds.), *Models of working memory: Mechanisms of active maintenance and executive control* (pp. 102-34). Cambridge: Cambridge University Press.
- Erlam, R. (2006). Elicited imitation as a measure of L2 implicit knowledge: An empirical validation study. *Applied Linguistics* 27, 464-91.
- Erlam, R., Ellis, R., & Loewen, S. (in press). Is incidental learning possible in the language classroom? The case of third person –s. Paper presentation at BAAL annual conference, 2007.
- Farley, A. P. (2004). Processing instruction and the Spanish subjunctive: Is explicit information needed? In B. VanPatten (Ed.), *Processing instruction: Theory, research, and commentary* (pp. 207-25). Mahwah, NJ: Erlbaum.
- Farrar, M. J. (1992). Negative evidence and grammatical morpheme acquisition. *Journal of Child Language*, 17, 607-24.
- Fernández-García, M., & Martínez-Arbelaiz, A. (2002). Negotiation of meaning in nonnative speaker nonnative speaker synchronous discussion. *CALICO Journal*, 19(2), 279-94.
- Fishman J. A. (1972). Domains and relationship between micro and macrosociolinguistics. In J. J. Gumperz & D. Hymes (Eds.), *Directions in sociolinguistics: The ethnography of communication* (pp. 435-53). New York: Holt, Rinehart & Winston.
- Foster, P., & Skehan, P. (1996). The influence of planning on performance in task-based learning. *Studies in Second Language Acquisition*, 18, 299-324.
- Fotos, S. (1993). Consciousness raising and noticing through focus on form: Grammar task performance versus formal instruction. *Applied Linguistics*, *4*, 385-407.

- Fotos, S., & Ellis, R. (1991). Communicating about grammar: A task-based approach. *TESOL Quarterly*, 25(4), 605-28.
- Gass, S. (2003). Input and interaction. In C. Doughty & M. H. Long (Eds.), *Handbook of second language acquisition* (pp. 224-55). Oxford: Blackwell.
- Gass, S. (2004). Context and second language acquisition. In B. VanPatten, J. Williams, S. Rott & M. Overstreet (Eds.), *Form-meaning connections in second language acquisition* (pp. 77-90). Mahwah, NJ: Erlbaum.
- Gass, S., & Alvarez Torres, M. J. (2005). Attention when? An investigation of the ordering effect of input and interaction. *Studies in Second Language Acquisition*, 27, 1-31.
- Gass, S., & Madden, C. (1985). (Eds.). *Input in second language acquisition*. Cambridge, MA: Newbury House Publishers.
- Gass, S., & Varonis, E. M. (1994). Input, interaction, and second language production. *Studies in Second Language Acquisition*, 16(3), 283-302.
- Gathercole, E., & Baddeley, A. D. (1993). *Working memory and language*. Hove, UK: Lawrence Erlbaum Associates.
- Goldman-Rakic, P. S. (1992). Working memory and mind. *Scientific American*, 267, 110-17.
- Gopher, D. (1992). Analysis and measurement of mental workload. In G. d'Ydewalle, P. Eelen & P. Bertelson (Eds.), *International perspectives on psychological science, Vol.2: The State of the Art* (pp. 265-91). Hove, UK: Lawrence Erlbaum Associates.
- Gopher, D., Weil, M., & Baraket, T. (1994). Transfer of skill from a computer game trainer to flight. *Human Factors*, *36*, 1–19.
- Graddol, G. (2006). English next. London: British Council.
- Green, P. S., & Hecht, K. (1992). Implicit and explicit grammar: An empirical study. *Applied Linguistics*, *13*(2), 169-84.
- Gregg, K. R. (1984). Krashen's monitor and Occam's razor. *Applied Linguistics*, *5*, 79-100.
- Gregg, K. R. (2001). Learnability and second language acquisition theory. In P. Robinson (Ed.), *Cognition and second language instruction* (pp. 152-82). Cambridge: Cambridge University Press.
- Gumperz, J. J. (1971). *Language in social groups*. Stanford, CA: Stanford University Press.

- Gumperz, J. J. (1977). The retrieval of sociocultural knowledge in conversational inference. In M. Saville-Troike (Ed.), *Linguistic and anthropology: 28th annual round table monograph series on languages and linguistics* (pp. 191–211). Washington, DC: Georgetown University.
- Haberlandt, K. (1997). Cognitive psychology. Boston: Allyn and Bacon.
- Halford, G. S., Cowan, N., & Andrews, G. (2007). Separating cognitive capacity from knowledge: A new hypothesis. *Trends in Cognitive Sciences*, 11, 236-42.
- Halliday, M. A. K. (1979). On communicative competence. In C. J. Brumfit & K. Johnson (Eds.), *The communicative approach to language teaching* (pp. 5-26). Oxford: Oxford University Press.
- Halliday, M. A. K. (1985). An introduction to functional grammar. London: Arnold.
- Hammerly, H. (1975). The deduction/induction controversy. *Modern Language Journal*, *59*, 15-8.
- Harley, B. (1994). Appealing to consciousness in the L2 classroom. *AILA Review. 11, Consciousness in second language learning*, 57-68.
- Harley, B., & Swain, M. (1984). The interlanguage of immersion students and its implications for second language teaching. In A. Davies, C. Criper & A. Howatt (Eds.), *Interlanguage* (pp. 291-311). Edinburgh: Edinburgh University Press.
- Hatch, E. (1978) Discourse analysis and second language acquisition. In E. Hatch (Ed.), *Second language acquisition* (pp. 401-35). Rowley, MA: Newbury House.
- Herron, D., & Tomasello, M. (1988). Learning grammatical structures in a foreign language: Modeling versus feedback. *French Review*, 6, 910-23.
- Howatt, A. P. R. with Widdowson, H. G. (2004). *A history of English language teaching*. Oxford: Oxford University Press.
- Hulstijn, J. H. (1995). Not all grammar rules are equal: Giving grammar instruction its proper place in foreign language teaching. In R. Schmidt (Ed.), *Attention and awareness in foreign language learning* (pp. 359-86). Honolulu, HI: University of Hawai'i Press.
- Hulstijn, J. H. (1997). Second-language acquisition research in the laboratory: Possibilities and limitations. *Studies in Second Language Acquisition*, 19, 131-43.
- Hulstijn, J. H. (2001). Intentional and incidental second language vocabulary learning: a reappraisal of elaboration, rehearsal and automaticity. In P. Robinson (Ed.), *Cognition and second language instruction* (pp. 258-86). Cambridge: Cambridge University Press.

- Hulstijn, J. H. (2002a). Towards a unified account of the representation, processing and acquisition of L2 knowledge. *Second Language Research*, 18(3), 193-223.
- Hulstijn, J. H. (2002b). What does the impact of frequency tell us about the language acquisition device? *Studies in Second Language Acquisition*, 24, 269-73.
- Hulstijn, J. H. (2003). Incidental and intentional learning. In C. Doughty & M. H. Long (Eds.), *The handbook of second language acquisition* (pp. 349-81). Oxford: Blackwell.
- Hulstijn, J. H. (2005). Theoretical and empirical issues in the study of implicit and explicit second-language learning. *Studies in Second Language Acquisition*, 27, 129-40.
- Hymes, D. (1966). On communicative competence. Paper originally read at the Research planning conference on language development among disadvantaged children, Yeshiva University, June 1966. Reprinted, in part, in C. J. Brumfit & K. Johnson (Eds.), *The communicative approach to teaching* (pp. 5-26). Oxford: Oxford University Press.
- Hymes, D. (1971). Competence and performance in linguistic theory. In R. Huxley & E. Ingram (Eds.), *Language acquisition and methods* (pp. 3-24). New York: Academic Press.
- Hymes, D. (1972). Models of the interaction of language and social life. In J. J. Gumperz & D. Hymes (Eds.), *Directions in sociolinguistics: Ethnography of communication* (pp. 35-71). New York: Holt Rinehart.
- Hymes, D. (1974). *Foundations in sociolinguistics: An ethnographic approach*. Philadelphia, PA: University of Pennsylvania Press.
- Iwashita, N. (2003). Negative feedback and positive evidence in task-based interaction: Differential effects on L2 development. *Studies in Second Language Acquisition*, 25, 1-36.
- Iwashita, N. (2004). The role of conversation in SLA: Review of studies on negative feedback and directions of future research. *Acquisition of Japanese as a Second Language*, 7, 163-85.
- James, C. (1983). Prepared comments for Arthur Hughes. In K. Johnson & D. Porter (Eds.), *Perspectives in communicative language teaching* (pp. 1). London: Academic Press.
- James, W. (1890). The principles of psychology. NY: Dover Publications.
- Johnson, K. (1979). Communicative approaches and communicative processes. In C. J. Brumfit & K. Johnson (Eds.), *The communicative approach to language teaching* (pp. 192-205). Oxford: Oxford University Press.

- Johnson, K. (1982). *Communicative syllabus design and methodology*. Oxford: Pergamon.
- Johnson, K. (2003). *Designing language teaching tasks*. New York: Palgrave Macmillan.
- Johnson, K., & Morrow, K. (1981). (Eds.). *Communication in the classroom*. London: Longman.
- Johnson, K., & Porter, D. (1983). (Eds.). *Perspectives in communicative language teaching*. London: Academic Press.
- Johnson, Y. (2003). *Modality and Japanese language*. Ann Arbor, MI: Center for Japanese Studies, The Regents of the University of Michigan.
- Jorden, E. H., & Noda, M. (1987). *Japanese, the spoken language: Part 1*. New Haven, CT: Yale University Press.
- Jourdenais, R. (2001). Cognition, instruction and protocol analysis. In P. Robinson (Ed.), *Cognition and second language instruction* (pp. 354-75). Cambridge: Cambridge University Press.
- Kandel, E. (2007). *In search of memory The emergence of a new science of mind.* NY: WW Norton & Company.
- Kandel, E. Schwartz, J. H., & Jessell, T. M. (2000). *Principles of neural science, 4th Ed.* NY: McGraw-Hill Professional Publishing.
- Kane, M. J., Hambrick, D. Z., Tuholski, S. W., Wilhelm, O., Payne, T. W., & Engle, R. W. (2004). The generality of working memory capacity: A latent-variable approach to verbal and visuo-spatial memory span and reasoning. *Journal of Experimental Psychology, General*, 133, 189-217.
- Kärkkäinen, E. (1992). Modality as a strategy in interaction: Epistemic modality in the language of native and non-native speakers of English. In B. Lawrence and Y. Kachru (Eds.), *Pragmatics and language learning monograph series*, *volume 3* (pp. 197-216). Urbana-Champaign, IL: University of Illinois at Urbana-Champaign.
- Kasper, G. (1985). Repair in foreign language teaching. *Studies in Second Language Acquisition*, 7(2), 200–15.
- Kawauchi, C. (2005). The effects of strategic planning on the oral narratives of learners with low and high intermediate L2 proficiency. In R. Ellis (Ed.), *Planning and task performance in a second language* (pp. 143–64). Philadelphia, PA: John Benjamins.
- Kelly, L. G. (1969). 25 centuries of language teaching. Rowley, MA: Newbury House Publishers.

- Kitade, K. (2000). L2 learners' discourse and SLA theories in CMC: Collaborative interaction in internet chat. *Computer Assisted Language Learning*, 13 (2), 143-66.
- Krashen, S. D., & Terrell, T. D. (1983). *The natural approach: Language acquisition in the classroom.* London: Prentice Hall Europe.
- Kratzer, A. (1977). What "must" and "can" must and can mean. *Linguistics and Philosophy*, 1, 337–55.
- Kunihiro, M. (1979). Eigo shikoo and Nihongo shikoo. Tokyo: Saimaru Publishing.
- LaBerge, D. (1995). *Attentional processing: The brain's art of mindfulness*. Cambridge, MA: MIT Press.
- LaBerge, D. (1999). Attention. In B. M. Bly & D. E. Rumelhart (Eds.), *Cognitive science* (pp. 44-89). London: Academic Press.
- LaBerge, D. (2000). Networks of attention. In M. S. Gazzaniga (Ed.), *The new cognitive neurosciences* (pp. 711-26). Cambridge, MA: MIT Press.
- LaBerge, D., Auclair, L., & Sieroff, E. (2000). Preparatory attention: Experiment and theory. *Consciousness and Cognition*, *9*(3), 396-434.
- Labov, W. (1972). *Sociolinguistic patterns*. Philadelphia, PA: University of Pennsylvania Press.
- Labov, W. (1973). The boundaries of words and their meaning. In C. J. Bailey & R. Shuy (Eds.), *New ways of analyzing variation in English* (pp. 340-73). Washington, DC: Georgetown University Press.
- Lai, C., & Zhao, Y. (2006). Noticing and text-based chat. *Language Learning & Technology*, 10(2), 102-20.
- Lapkin, S., Swain, M., & Smith, M. (2002). Reformulation and the learning of French pronominal verbs in a Canadian French immersion context. *Modern Language Journal*, 86, 485-507.
- Larsen-Freeman, D. (1985). State of the art on input in second language acquisition. In S. Gass & C. Madden, C. (Eds.), *Input in second language acquisition* (pp. 433-44). Cambridge, MA: Newbury House Publishers.
- Larsen-Freeman, D. (1997). Chaos/complexity science and second language acquisition. *Applied Linguistics*, 18(2), 141-65.
- Larsen-Freeman, D. (2002). Language acquisition and language use from a chaos / complexity theory perspective. In C. Kramsch (Ed.), *Language acquisition and socialization* (pp.33-46). London: Continuum.

- Larsen-Freeman, D. (2003). *Teaching language: From grammar to grammaring*. Boston, MA: Heinle.
- Larsen-Freeman, D. (2004). Reflections on form-meaning connection research in second language acquisition. In B. VanPatten, J. Williams, S. Rott & M. Overstreet (Eds.), *Form-meaning connections in second language acquisition* (pp. 237-44). Mahwah, NJ: Erlbaum.
- Larsen-Freeman, D. (2005). Making sense of frequency. *Studies in Second Language Acquisition*, 24, 275-85.
- Larsen-Freeman, D., & Freeman, D. (2008). Language moves: The place of "foreign" languages in classroom teaching and learning. *Review of Research in Education*, 32(1), 147-86.
- Larsen-Freeman, D., & Long, M. H. (1991). An introduction to research on second language acquisition. London: Longman.
- Leech, G. N. (2004). Meaning and the English verb. Harlow: Longman.
- Leow, R. P. (1997). Attention, awareness, and foreign language behavior. *Language Learning*, 47, 467-506.
- Leow, R. P. (1998). The effect of amount and type of exposure on adult learners' L2 development in SLA. *The Modern Language Journal*, 82, 49-68.
- Leow, R. P. (2000). A study of the role of awareness in foreign language behavior: Aware vs. unaware learners. *Studies in Second Language Acquisition*, 22, 557-84.
- Leow, R. P. (2001). Attention, awareness, and foreign language behavior. *Language Learning*, *51*, 113-55.
- Levelt, W. (1989). *Speaking: From intention to articulation*. Cambridge, MA: MIT Press.
- Lightbown, P. M. (1998). The importance of timing in focus on form. In C. Doughty & J. Williams (Eds.), *Focus on form in classroom second language acquisition* (pp. 177-96). Cambridge: Cambridge University Press.
- Lightbown, P. M., & Spada, N. (1990). Focus on form and corrective feedback in communicative language teaching: Effects on second language learning. *Studies in Second Language Acquisition*, 12, 429-48.
- Loewen, S., & Philp, J. (2006). Recasts in the adult L2 classroom: Characteristics, explicitness and effectiveness. *Modern Language Journal*, 90(4), 536-56.
- Logan, G. D. (1988). Toward an instance theory of automatization. *Psychological Review*, 95(4): 492-527.

- Logan, G. D. (1991). Automaticity and memory. In W. E. Hockley & S. Lewandowski (Eds.). *Relating theory and data*. Hillsdale, NJ: Erlbaum.
- Long, M. H. (1981). Input, interaction and second language acquisition. In H. Winitz (Ed.), *Native language and foreign language acquisition* (pp. 259-78). Annals of the New York Academy of Sciences.
- Long, M. H. (1989). Focus on form in task-based language teaching. *University of Hawai'i Working Papers in ESL.*, 16(2), 35-49.
- Long, M. H. (1991). Focus on form: A design feature in language teaching methodology. In K. de Bot, R. B. Ginsberg and C. Kramsch (Eds.), *Foreign language research in cross cultural perspective* (pp. 39-52). Philadelphia, PA: John Benjamins.
- Long, M. H. (1996). The role of the linguistic environment in second language acquisition. In W. C. Ritchie & T. K. Bhatia (Eds.), *Handbook of second language acquisition* (pp. 413-68). San Diego, CA: Academic Press.
- Long, M. H. (1997). Focus on form in task-based language teaching. Fourth Annual McGraw-Hill Satellite Teleconference.
- Long, M. H. (2007). Problems in SLA. Mahwah, NJ: Erlbaum.
- Long, M. H., Inagaki, S., & Ortega, L. (1998). The role of implicit negative feedback in SLA: Models and recasts in Japanese and Spanish. *Modern Language Journal*, 82, 357-71.
- Long, M. H., & Robinson, P. (1998). Focus on Form: theory, research and practice. In C. Doughty & J. Williams (Eds.), *Focus on form in classroom SLA* (pp. 15-41). Cambridge: Cambridge University Press.
- Loschky, L., & Bley-Vroman, R. (1993). Grammar and task-based methodology. In G. Crookes & S. Gass (Eds.), *Tasks and language learning: Integrating theory and practice* (pp. 123-67). Clevedon: Multilingual Matters.
- Lyons, J. (1977). Semantics. Cambridge: Cambridge University Press.
- Lyster, R. (1998). Negotiation of form, recasts, and explicit correction in relation to error types and learner repair in immersion classrooms. *Language Learning*, 48(2), 183-218.
- Lyster, R., & Mori, H. (2006). Interactional feedback and instructional counterbalance. *Studies in Second Language Acquisition*, 28(2), 269-300.
- Lyster, R., & Ranta, L. (1997). Corrective feedback and learner uptake: Negotiation of form in communicative classrooms. *Studies in Second Language Acquisition*, 19, 37-66.

- Mackey, A. (2006). From introspections, brain scans, and memory tests to the role of social context: Advancing research on interaction and learning. *Studies in Second Language Acquisition*, 28(2), 369-79.
- Mackey, A., Gass, S., & McDonough, K. (2000). How do learners perceive interactional feedback? *Studies in Second Language Acquisition*, 22(4), 471-97.
- Mackey, A., & Philp, J. (1998). Conversational interaction and second language development: Recasts, responses, and red herrings? *Modern Language Journal*, 82, 338-56.
- Mackey, A., Philp, J., Egi, T., Fujii, A., & Tatsumi, T. (2002). Individual differences in working memory, noticing of interactional feedback and L2 development. In P. Robinson (Ed.), *Individual differences in instructed language learning* (pp. 181-209). Amsterdam: John Benjamins.
- MacWhinney, B. (Ed.). (1987). *Mechanisms of language acquisition*. Hillsdale, NJ: Lawrence Erlbaum.
- Makino, S., & Tsutsui, M. A. (1991). *Dictionary of basic Japanese grammar*. Tokyo: Japan Publications Trading Co.
- McArthur, T. (2006). Twenty years on. English Today, 22(2), 62-64.
- McLaughlin, B. (1978). The monitor model: Some methodological considerations. *Language Learning*, 28(2), 309-32.
- Miller, G.A., Galanter, E., & Pribram, K. H. (1960). *Plans and the structure of behavior*. New York: Holt, Rinehart & Winston.
- Miyake, A., & Shah, P. (1999). Toward unified theories of working memory: Emerging general consensus, unresolved theoretical issues and future directions. In A. Miyake & P. Shah (Eds.), *Models of working memory: Mechanisms of active maintenance and executive control* (pp. 442-82). Cambridge: Cambridge University Press.
- Muranoi, H. (2000). Focus on form through interaction enhancement: Integrating formal instruction into a communicative task in EFL classrooms. *Language Learning*, 50(4), 617–73.
- Newell, A., & Rosenbloom, P. S. (1981). Mechanisms of skill acquisition and the law of practice. In J.R. Anderson, (Ed.). *Cognitive skills and their acquisition*. Hillsdale, NJ: Lawrence Erlbaum.
- Newmark, L. (1979). How not to interfere with language leaning. In C. J. Brumfit & K. Johnson (Eds.), *The communicative approach to language teaching* (pp. 160-66). Oxford: Oxford University Press.
- Nobre, A.C. (2001) Orienting attention to instants in time. *Neuropsychologia*, *39*, 1317-28.

- Norris, J., & Ortega, L. (2000). Effectiveness of L2 instruction: A research synthesis and quantitative meta-analysis. *Language Learning*, *50*, 417-528.
- Nunan, D. (1989). *Designing tasks for the communicative classroom*. Cambridge: Cambridge University Press.
- Nunan, D. (2004). *Task based language teaching*. Cambridge: Cambridge University Press.
- Nuyts, J. (1992). Aspects of a cognitive-pragmatic theory of language: On cognition, functionalism, and grammar. Amsterdam: John Benjamins.
- Ohta, A. (2000). Rethinking recasts: A learner-centered examination of corrective feedback in the Japanese classroom. In J. K. Hall & L. Verplaetse (Eds.), *The construction of second and foreign language learning through classroom interaction* (pp. 47–71). Mahwah, NJ: Erlbaum.
- Oliver, R. (1995). Negative feedback in child NS/NNS conversation. *Studies in Second Language Acquisition*, 17(4), 459-81.
- Ortega, L. (2005). What do learners plan?: Learner-driven attention to form during pre-task planning. In R. Ellis (Ed.), *Planning and task performance in a second language* (pp. 77–109). Philadelphia, PA: John Benjamins.
- Palmer, F. R. (1986). *Mood and modality*. Cambridge: Cambridge University Press.
- Papafragou, A. (2000). *Modality: Issues in the semantics-pragmatics interface*. Oxford: Elsevier Science Ltd.
- Pascual-Leone, A. (in press). Modifying decision making. 11th Annual Pinkel Endowed Lecture at The Institute for Research in Cognitive Science, University of Pennsylvania.
- Pavlov, I. I. (1927). *Conditioned reflexes*. Translated by G. V. Anrep, London: Oxford University Press.
- Phillips, S. U. (1972). Participant structures and communicative competence. Warm Springs children in community and classroom. In C. Cazden, V. P. John & D. Hymes (Eds.), *Functions of language in the classroom* (pp. 370-94). New York: Teachers College Press.
- Piaget, J. (1950). The Psychology of Intelligence. New York: Routledge
- Pica, T. (1992). The textual outcomes of native speaker non-native speaker negotiation: What do they reveal about second language learning? In C. Kramsch & S. McGonnell-Ginet (Eds.), *Text and context: Cross-disciplinary perspectives on language study* (pp. 198-237). Lexington: D.C. Heath & Co.

- Pica, T. (1994). Research on negotiation: What does it reveal about second language learning conditions, processes, and outcomes? *Language Learning*, 44, 493-527.
- Pica, T. (2002). Subject matter content: How does it assist the interactional and linguistic needs of classroom language learners? *The Modern Language Journal*, 86(1), 1–19.
- Pica, T. (2008). Task-based teaching and learning. In B. Spolsky and F. Hult (Eds.), *Handbook of educational linguistics* (pp. 525-538). Oxford: Blackwell.
- Pica, T., Kanagy, R., & Falodun, J. (1993). Choosing and using communication tasks for second language instruction and research. In G. Crookes & S. Gass (Eds.), *Tasks and language learning: Integrating theory and practice* (pp. 9-34). Clevedon: Multilingual Matters.
- Pica, T., Young, R., & Doughty, C. (1987). The impact of interaction on comprehension. *TESOL Quarterly*, 21, 737-58.
- Pienemann, M. (1989). Is language teachable? Psycholinguistic experiments and hypotheses. *Applied Linguistics 10*, 52-79.
- Pienemann, M. (2003). Language processing capacity. In C. Doughty & M. H. Long (Eds.), *Handbook of second language acquisition* (pp. 679-714). Oxford: Blackwell.
- Pinker, S. (1989). Resolving a learnability paradox in the acquisition of the verb lexicon. In M. Rice & R. Schiefelbusch (Eds.), *The teachability of language* (pp. 13-61). Baltimore: Paul H. Brookes Publishing Co.
- Porter, P. (1986). How learners talk to each other: Input and interaction in task-centered discussions. In R. R. Day (Ed.), *Talking to learn: Conversation in second language acquisition* (pp. 200-22). Rowley, MA: Newbury House.
- Posner, M. I. & DiGirolamo, G. J. (2000). Attention in cognitive neuroscience: An overview. In M. S. Gazzaniga (Ed.), *The new cognitive neurosciences* (pp. 623-31). Cambridge, MA: MIT Press.
- Prabhu, N. S. (1980). Teaching English as communicative proposal for syllabus design methodology evaluation. *Newsletter, special series, Vol. 1(4). Regional Institute of English South India, Bangalore-52.* Warwick: The Dicken's Collection, University of Warwick.
- Prabhu, N. S. (1982). *The communicational teaching project, South India*. Madras: The British Council (mimeo).
- Prabhu, N. S. (1987). Second language pedagogy. London: Oxford University Press.
- Richard-Amato, P., & Snow, M. A. (1992). *The multicultural classroom: Reading for content-area teachers.* White Plains: Longman.

- Robinson, P. (1996). Learning simple and complex second language rules under implicit, incidental, rule-search, and instructed conditions. *Studies in Second Language Acquisition*, 18, 27-67.
- Robinson, P. (1997). Generalizability and automaticity of second language learning under implicit, incidental, enhanced, and instructed conditions. *Studies in Second Language Acquisition*, 19, 223-47.
- Robinson, P. (2001). Task complexity, task difficulty, and task production: Exploring interactions in a componential framework. *Applied Linguistics*, 22, 27-57.
- Robinson, P. (2003). Attention and memory in SLA. In C. Doughty & M. H. Long (Eds.), *Handbook of second language acquisition* (pp. 631-78). Oxford: Blackwell.
- Robinson, P. (2007). Aptitudes, abilities, contexts and practice. In R. M. DeKeyser (Ed.), *Practicing in a second language: Perspectives from applied linguistics and cognitive psychology* (pp. 256-86). Cambridge: Cambridge University Press.
- Robinson, P., & Ellis, N. C. (2008). Conclusion: Cognitive linguistics, second language acquisition and L2 instruction issues for research. In P. Robinson & N. C. Ellis (Eds.), *Handbook of cognitive linguistics and second language acquisition* (pp. 489-546). New York: Routledge.
- Rosa, E., & O'Neill, M. (1999). Explicitness, intake, and the issue of awareness: Another piece to the puzzle. *Studies in Second Language Acquisition*, 2, 511-56.
- Samuda, V. (2001). Guiding relationships between form and meaning during task performance: The role of the teacher. In M. Bygate, P. Skehan & M. Swain (Eds.), *Researching pedagogic tasks: Second language learning, teaching and testing* (pp. 119-40). Harlow: Pearson Education Limited.
- Samuda, V., & Bygate, M. (2008). *Tasks in second language learning*. Houndmills: Palgrave Macmillan.
- Sato, C. J. (1986). Conversation and interlanguage development: Rethinking the connection. In R. R. Day (Ed.), *Talking to learn: Conversation in second language acquisition* (pp. 23-45). Rowley, MA: Newbury House.
- Schafer, W. D. (2001). Replication: A design principle for field research. *Practical Assessment, Research & Evaluation*, 7(15).
- Schmidt, R. (1990). The role of consciousness in second language learning. *Applied Linguistics*, 11, 17-46.
- Schmidt, R. (1992). Psychological mechanisms underlying second language fluency. *Studies in Second Language Acquisition*, 14, 357-85.

- Schmidt, R. (1994). Deconstructing consciousness: In search of useful definitions for applied linguistics. *AILA Review, 11*, 11-26.
- Schmidt, R. (1995). Consciousness and foreign language learning: A tutorial on the role of attention and awareness in learning. In R. Schmidt, (Ed.), *Attention and awareness in foreign language learning* (pp. 1-64). Honolulu, HI: University of Hawai'i Press.
- Schmidt, R. (2001). Attention. In P. Robinson (Ed.), *Cognition and second language instruction* (pp. 3-32). Cambridge: Cambridge University Press.
- Searle, J. R. (1969). *Speech acts: An essay in the philosophy of language*. Cambridge: Cambridge University Press.
- Searle, J. R. (1976). A classification of illocutionary acts. *Language in Society*, 5(1), 1-23.
- Seedhouse, P. (1997). Combining meaning and form. ELT Journal, 51, 336-44.
- Segalowitz, N. (2003). Automaticity and second language. In C. Doughty & M. H. Long (Eds.), *Handbook of second language acquisition* (pp. 382-408). Oxford: Blackwell.
- Shapiro, S. S., & Wilk, M. B. (1965). An analysis of variance test for normality. *Biometrika* 52(3), 591-9.
- Sharwood Smith, M. (1981). Consciousness-raising and the second language learner. *Applied Linguistics* 2, 159-69.
- Sharwood Smith, M. (1993). Input enhancement in instructed SLA. *Studies in Second Language Acquisition*, 15, 165-79.
- Shavelson, R. J. (1996). *Statistical reasoning for the behavioral sciences*. Boston: Allyn & Bacon.
- Shirai, Y. (2004). A multiple-factor account for the form-meaning connections in the acquisition of tense-aspect morphology. In B. VanPatten, J. Williams, S. Rott & M. Overstreet (Eds.), *Form-meaning connections in second language acquisition* (pp. 91-114). Mahwah, NJ: Erlbaum.
- Shirai, Y. (2007). The aspect hypothesis, the comparative fallacy, and the validity of obligatory context analysis: A reply to Lardiere (2003). *Second Language Research*, 23, 51-64.
- Skehan, P. (1998). *A cognitive approach to language learning*. London: Oxford University Press.
- Skehan, P. (2003). Task based instruction. *Language Teaching*, 36, 1-14.

- 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*, 185-211.
- Skehan, P., & Foster, P. (1999). The influence of task structure and processing conditions on narrative retellings. *Language Learning*, 49, 93-120.
- Skehan, P., & Foster, P. (2001). Cognition and tasks. In P. Robinson (Ed.), *Cognition and second language instruction* (pp. 125-51). Cambridge: Cambridge University Press.
- Smith, B. (2003). Computer-mediated negotiated interaction: An expanded model. *The Modern Language Journal*, 87 (1), 38-57.
- Spada, N. (1987). Relationships between instructional differences and learning outcomes: A process–product study of communicative language teaching. *Applied Linguistics*, 8(2), 137-55.
- Spada, N. (1997). Form-focused instruction and second language acquisition: A review of classroom and laboratory research. *Language Teaching*, 30(2), 73-87.
- Spada, N., & Lightbown, P. M. (1993). Instruction and development of questions in L2 classrooms. *Studies in Second Language Acquisition 15*, 205-24.
- Stern, H. (1992). *Issues and options in language teaching*. Oxford: Oxford University Press.
- Stern, E., & Mangels, J. A. (2006). Neural correlates of top-down attentional biasing during the spatial stroop task: An event-related potential (ERP) study. *Journal of Cognitive Neuroscience*, 18(6), 1004-17.
- Swain, M. (1995). Three functions of output in second language learning. In G. Cook & B. Seidlhofer (Eds.), *Principle and practice in applied linguistics: Studies in honor of H. G. Widdowson* (pp. 125-44). Oxford: Oxford University Press.
- Swain, M. (1998). Focus on form through conscious reflection. In C. Doughty & J. Williams (Eds.), *Focus on form in classroom SLA* (pp. 64-81). Cambridge: Cambridge University Press.
- Swain, M. (1999). Integrating language and content teaching through collaborative tasks. In C. Ward & W. Renandya (Eds.), *Language teaching: New insights for the language teacher* (pp. 125-47). Singapore: RELC. Reprinted in the *Modern Language Teachers' Association of Western Australia's Newsletter*, 3(3), 4-12.
- Swain, M. (2000). The output hypothesis and beyond: Mediating acquisition through collaborative dialogue. In J.P. Lantolf (Ed.), *Sociocultural theory and second language learning* (pp. 97-114). Oxford: Oxford University Press.
- Swain, M., & Lapkin, S. (2001). Focus on form through collaborative dialogue: Exploring task effects. In M. Bygate, P. Skehan & M. Swain (Eds.),

- Researching pedagogic tasks second language learning, teaching and testing (pp. 99-118). Harlow: Pearson Education Limited.
- Sweetser, E. (1990). *From etymology to pragmatics*. Cambridge: Cambridge University Press.
- Talmy, L. (1988). Force dynamics in language and cognition. *Cognitive Science*, 12(1), 49-100.
- Terrell, T. (1991). The role of grammar instruction in a communicative approach. *Modern Language Journal*, 75, 52-63.
- Tohsaku, Y. (1999). *Yookoso: Continuing with contemporary Japanese*. Boston: McGraw-Hill College.
- Tomasello, M (2003). *Constructing a language: A usage-based theory of language acquisition.* Boston: Harvard University Press.
- Tomlin, R., & Villa, V. (1994). Attention in cognitive science and SLA. *Studies in Second Language Acquisition*, *16*(2), 183-204.
- Treisman, A. (1985). Preattentive processing in vision. *Computer Vision, Graphics and Image Processing*, *31*(2), 156-77.
- Treisman, A. (2004). Psychological issues in selective attention. In M. Gazzaniga (Ed.), *The cognitive neurosciences* (pp. 529-44). Cambridge, MA: MIT Press.
- Van den Branden, K. (2006). (Ed.). *Task-based language teaching: From theory to practice*. Cambridge: Cambridge University Press.
- van Lier, L. (1988). The classroom and the language learner: Ethnography and second-language classroom research. London: Longman.
- VanPatten, B. (1994). Evaluating the role of consciousness in SLA: Terms, linguistic features, and research methodology, *AILA Review*, 11, 27-36.
- VanPatten, B. (1996). *Input processing and grammar instruction*. Norwood, NJ: Ablex.
- VanPatten, B. (2002). Processing instruction: An update. *Language Learning*, 52(4), 755-803.
- VanPatten, B. (2004). Input processing in SLA. In B. VanPatten (Ed.), *Processing Instruction: Theory, research, and commentary* (pp. 33-63). Mahwah, NJ: Erlbaum.
- VanPatten, B., & Cadierno, T. (1993). Explicit instruction and input processing. *Studies in Second Language Acquisition*, 15, 225-44.

- VanPatten, B., Williams, J., & Rott, S. (2004). Form-meaning connections in second language acquisition. In B. VanPatten, J. Williams, S. Rott & M. Overstreet (Eds.), Form-meaning connections in second language acquisition (pp. 1-28). Mahwah, NJ: Erlbaum.
- Vendler, Z. (1967). Linguistics and philosophy. Ithaca, NY: Cornell University Press.
- Varonis, E., & Gass, S. (1985), Non native / non native conversations: A model for negotiation of meaning. *Applied Linguistics*, 6, 71-90.
- Wagner-Gough, J., & Hatch, E. (1975). The importance of input in second acquisition studies. *Language Learning*, 25, 297-307.
- White, L. (1981). The responsibility of grammatical theory to acquisitional data. In N. Hornstein & D. Lightfoot (Eds.), *Explanation in Linguistics* (pp. 241-71). London: Longman.
- White, L. (1987). Against comprehensible input: The input hypothesis and development of L2 competence. *Applied Linguistics*, *8*, 95-110.
- White, L., Spada, N., Lightbown, P., & Ranta, L. (1991). Input enhancement and L2 question formation. *Applied Linguistics*, 12, 416-32.
- Wickens, C.D. (1992). *Engineering psychology and human performance*. NY: Harper Collins.
- Wickens, C. D. (2008). Multiple resources and mental workload. *Human Factors: The Journal of the Human Factors and Ergonomics Society*, 50(3), 449-55.
- Widdowson, H. G. (1978). *Teaching language as communication*. London: Oxford University Press.
- Widdowson, H. G. (1979). Direction in the teaching of discourse. In C. J. Brumfit & K. Johnson (Eds.), *The communicative approach to language teaching* (pp. 47-60). Oxford: Oxford University Press.
- Wigglesworth, G. (2001). Influence of performance in task-based oral assessment. In M. Bygate, P. Skehan & M. Swain (Eds.), *Researching pedagogic tasks second language learning, teaching and testing* (pp. 186-209). Harlow: Pearson Education Limited.
- Wilkins, D. A. (1976). Notional syllabuses. Oxford: Oxford University Press.
- Wilkins, D. A. (1979). Grammatical, situational and notional syllabuses. In C. J. Brumfit & K. Johnson (Eds.), *The communicative approach to language teaching* (pp. 82-90). Oxford: Oxford University Press.
- Williams, J. (1999). Learner-generated attention to form. *Language Learning*, 49(4), 583-625.

- Williams, J., & Evans, J. (1998). What kind of focus and on which forms? In C. Doughty & J. Williams (Eds.), *Focus on form in classroom SLA* (pp. 139-55). Cambridge: Cambridge University Press.
- Williams, J. N. (1999). Memory, attention, and inductive learning. *Studies in Second Language Acquisition*, 21, 1-48.
- Williams, J. N. (2004). Implicit learning of form-meaning connections. In B. VanPatten, J. Williams, S. Rott & M, Overstreet (Eds.), *Form-meaning connections in second language acquisition* (pp. 203-18). Mahwah, NJ: Erlbaum.
- Williams, J. N. (2005). Learning without awareness. *Studies in Second Language Acquisition*, 27(2), 269-304.
- Willis, J. (1996). A framework for task-based learning. Harlow: Longman.
- Willis, D., & Willis, J. (1996). Consciousness-raising activities in the language classroom. In J. Willis and D. Willis (Eds.), *Challenge and change in language teaching* (pp. 63-76). London: Heinemann.
- Willis, D., & Willis, J. (2007). *Doing task-based teaching*. Oxford: Oxford University Press.
- Wolfe, J. M. (1994). Guided search 2.0. A revised model of visual search. *Psychonomic bulletin & review, 1*(2), 202-38.
- Wong, W. (2004). The nature of processing instruction. In B. VanPatten (Ed.), *Processing instruction: Theory, research, and commentary* (pp. 33-63). Mahwah, NJ: Erlbaum.
- Yantis, S. (1996). Attentional capture in vision. In A. F. Kramer, M. G. H. Colegs & G. D. Logan (Eds.), *Converging operations in the study of visual selective attention* (pp. 45-76). Washington, DC: American Psychological Association.
- Yule, G. (1997). Referential communication tasks. Mahwah, NJ: Erlbaum.
- Zhao, Y., Alvarez Torres, M. J., Smith, B., & Tan, H. S. (2004). The non-neutrality of technology: A theoretical analysis and empirical study of computer mediated communication technologies. *Journal of Educational Computing Research*, 30, 23-54.
- Ziegeler, D. (2000). *Hypothetical modality: Grammaticalisation in an L2 dialect*. Amsterdam: John Benjamins.