

**Dissertation Title:**

The relationships between individual learning styles and learning strategies when using electronic materials for practicing EFL listening

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**Summary:**

It is acknowledged by many scholars (e.g., Grasha, 1984; Hayes, 1993; O'Malley, 1990; Oxford, 1990) that if we can offer students appropriate strategy training or guidance, preferably with the consideration of the students' learning styles, the learning will be more effective. However, to date there is no clear answer as to how to offer students with appropriate strategy guidance while taking account of their learning styles (Jamieson, 1993; Nunan, 1997), and whether intentionally matching instruction with learners' learning styles will enhance learners' performance. In order to find the answers to these questions, this research attempted to investigate how the learning styles of learners who learn *English as a foreign language* (EFL) were related to the learners' EFL listening strategies in *computer assisted language learning* (CALL) contexts, and whether EFL learners' listening performance would be enhanced if we offered the learners the "matching" materials including relevant strategy guidance, different question types/tasks, and various CALL functions. Three consecutive studies were designed for the research with a follow-up interview, which was conducted to seek in-depth clarifications of, and possible explanations for, the findings from the last study.

The first study involved quantitative research which employed two questionnaires, a learning style questionnaire which was adapted from the Cognitive Style Index (CSI) (Allinson, 1996) and a listening strategy questionnaire which was adapted from the Strategy Inventory for Language Learning (SILL) (Oxford, 1990), to seek the relationships between the EFL learners' learning styles and listening strategies. Both of the questionnaires were adapted and revised to ensure their reliability and validity with 62 subjects in the pilot study. In the main study, questionnaires were collected from 118 subjects. Two categories of the EFL learning styles were generated from the results: Thoughtful Attention to Details and Impulsivity, and five categories of the

EFL listening strategies were generated: Metacognitive, Memory, Communication Oriented, Learning Reinforcement, and Elaborating and Contextualizing. The results also indicated that the Thoughtful Attention to Details learning style category was significantly related to the Metacognitive listening strategy category.

The second study, which involved qualitative research, examined whether there were relationships between EFL learners' strategy use, their learning styles, and listening performance. A computer listening program, Mimi 1, was designed for this study with embedded tracking codes, which recorded the participants' usage behaviors and entered data. In order to provide more reliable and valid data (i.e., the actual strategy use in Mimi1 and the learners' listening performances), information was also

collected from another two sources, observations and retrospective interviews, which were used to triangulate the findings. The results indicated that the metacognitive listening strategies applied in the CALL context were similar to those applied in traditional EFL contexts (see O'Malley, 1990; O'Malley, 1989; Oxford, 1990; Oxford, 1995). Furthermore, the learners' use of EFL metacognitive listening strategies were also found to be significantly different among the learners who had different learning styles (intuitive, neutral, and analytical styles), which were identified according to the learners' scores of the question items from the Thoughtful Attention to Details learning style category. It was also found that the EFL learners' learning styles and metacognitive listening strategy use were also related to their EFL listening performances.

The third study compared EFL learners' listening progress after using CALL listening materials which were thought to be "suitable" for their learning styles (matching) with that after the learners had used CALL listening materials which were thought to be "not suitable" for their learning styles (mismatching). 90 subjects (30 analytical, 30 neutral and 30 intuitive learners) were recruited for this experiment following a Latin Square sequence, which counterbalanced nuisance variables. The CALL listening materials comprised three kinds of treatments - various CALL functions, different question types/tasks, and metacognitive listening strategy guidance. The results from Study 3 showed that, in the matching cases, the intuitive learners made the most progress using the materials which were thought to be "suitable" for them and, on the contrary, the analytical learners made the least progress; in the mismatching cases, the intuitive learners made the most progress, and, on the contrary, the analytical learners and the neutral learners did not make as much progress as that of the intuitive learners. Moreover, after the results of Study 3 were evaluated in the light of the clarifications from the follow-up interviews, it was found that the learners' motivation and attitudes towards the strategy guidance, the quantity of the strategies guided and reminded in the programs, the question types, and the learners' computer using preferences might be factors which influenced the learners' performances. Finally, pedagogical implications were addressed in the light of the findings from the three studies, and further research was called for mainly to compensate for the limitations in this research.

## References from Summary

- Allinson, C. W., & Hayes, J. (1996). The cognitive style index: a measure of intuition-analysis for organisational research. *Journal of management studies*, 33(1), 119-135.
- Grasha, A. F. (1984). Learning styles: The journey from Greenwich observatory (1796) to the college classroom (1984). *Improving college and university teaching*, 32, 46-53.
- Hayes, J., & Allinson, C. W. (1993). Matching learning styles and instructional strategy: an application of the person-environment Interaction paradigm. *Perceptual and motor skills*, 76, 63-79.
- Jamieson, J., Norfleet, L., & Berbesada, N. (1993). Success, failures, and dropouts in computer-assisted language lessons. *CAELL journal*, 4(1), 12-20.
- Nunan, D. (1997). Strategy training in the language classroom: an empirical investigation. *RELC journal*, 28(2), 56-81.
- O'Malley, J. M., & Chamot, A. U. (1990). *Learning Strategies in Second Language Acquisition*. Cambridge: Cambridge University Press.
- O'Malley, J. M., Chamot, A. U., & Kupper, L. (1989). Listening comprehension strategies in second language acquisition. *Applied linguistics*, 10(4), 418-437.
- Oxford, R. L. (1990). *Language learning strategies: what every teacher should know*. Boston, MA: Heinle & Heinle Publishers.
- Oxford, R. L., & Burry-Stock, J. A. (1995). Assessing the use of language learning strategies worldwide with the ESL/EFL version of the strategy inventory for language learning. *System*, 23(2), 153-175.

## Complete Reference List

- Adey, P., R. Fairbrother, & William, D. (1999). *Learning Styles and Strategies: A review of research*. London: The Centre for the Advancement of Thinking.
- Bell, J. (1991). *Doing your research project*. Milton Keynes.: Open University Press.
- Brown, H. (1994). *Principles of language learning and teaching* (3rd ed.). Englewood Cliffs, NJ: Prentice Hall Regents.
- Chickering, A. W. (1976). The double bind of field dependence/independence in program alternative for educational development. In S. Messick (Ed.), *Individuality in learning: Impactions of cognitive styles and creativity for human development*. San Francisco, CA: Jossey-Bass.
- Coffield, F. C., Moseley, D. V. M., et al. (2003). *Learning styles and pedagogy in post-16 learning: Findings of a systematic and critical review of learning styles models*. London: LSRC.
- Cohen, A. D. (2003). The learner's side of foreign language learning; Where do styles, strategies, and tasks meet? *International Research Applied Linguistic*, 41, 279-291.
- Cohen, L., Manion, L., et al. (2000). *Research methods in education* (5th ed.). London: RoutledgeFalmer.
- Collis, B., Peters, O., et al. (2000). Influences on the educational use of the WWW, email and videoconferencing. *Innovations in Education and Training International*, 37(2), 108-119.
- Dunn, R. K., & Price, G. (1979). Identifying individual learning styles. In (Eds) *Student learning styles : Diagnosing and prescribing programs*. Reston,VA.: National Association of Secondary School Principals.
- Goodwyn, A. (1992). *English teaching and media education*. Buckingham: Open University Press.
- Graham, S. (1997). *Effective language learning*. Clevedon: Multilingual Matter Ltd.
- Gringerenko, E. L., & Sternberg, R. J. (1995). Thinking styles. In D. H. Saklofske & M. Zeidner (Eds.), *International handbook of personality and intelligence*. New York, NY: Plenum Press.
- Liu, M., & Reed, M. W. (1994). The relationship between the learning strategies and learning styles in a hypermedia environment. *Computers in Human Behavior*, 10(4), 419-34.
- Messick, S. (1976). Personal styles and educational options. In S. Messick (Eds.), *Individuality in learning: Impactions of cognitive styles and creativity for human development*. San Francisco, CA: Jossey-Bass.
- Messick, S. (1984). The nature of cognitive styles: Problems and promise in educational practice. *Educational Psychologist*, 19(2), 59-74.

- Nisbett, R., & Wilson, T. (1977). Telling more than we can know: Verbal reports on mental processes. *Psychological Review*, 84, 231-59.
- Nunan, D. (1992). *Research methods in language learning*. Cambridge: Cambridge University Press.
- O'Brien, L. (1989). Learning styles: Make the student aware. *National Association of Secondary School Principals' Bulletin*, 73, 85-89.
- Oxford, R., & Ehrman, M. (1993). Second language research on individual differences. *Annual Review of Applied Linguistics*, 13, 188-205.
- Oxford, R. L. (1990). *Language learning strategies: What every teacher should know*. Boston, MA: Heinle & Heinle Publishers.
- Reid, J. (1984). Perceptual learning style preference questionnaire. Copyrighted by Reid. Available through Joy Reid. Translated by Department of English, University of Wyoming, Laramie, WY82070.
- Riding, R., & Rayner, S. (1998). *Cognitive styles and learning strategies: Understanding style differences in learning and behaviour*. London: David Fulton Publishers Ltd.
- Sabry, K., & Baldwin, L. (2003). Web-based interaction and learning styles. *British Journal of Educational Technology*, 34(4), 443-454.
- Whittington, C., & Campbell, L. (1998). Task-oriented learning on the web. *Innovations in Education and Training International*, 36(1), 26-33.
- Willing, K. (1993). *Learning styles in adult migrant education*. Sydney: Macquarie University.
- Wintergerst, A. C., DeCapua, A., & Itzen, R. (2001). The construct validity of one learning styles instrument. *System*, 29, 385-403.