

## Report on Kelly Cheng-Yi Chang's dissertation

The title of my PhD research is *The Relationships between Individual Learning Styles and Learning Strategies When Using Electronic Materials for Practicing EFL Listening*.

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.

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## **PUBLICATION & CONFERENCE PRESENTATION**

### **ARISING FROM THE PHD RESEARCH**

1. Chang, C.Y. (2005) *Relating listening strategies to EFL learners' learning styles*. IATEFL 2005, Cardiff UK.
2. Chang, C.Y. (2005) *The 'real' relationship between sense of security and metacognitive listening strategies in the context of computer language learning environment*. Leeds Poster Conference, University of Leeds UK.
3. Chang, C.Y. and Windeatt, S. (2005) *What Listening Strategies do different learning style EFL learners really use in CALL contexts?* EuroCALL, Jagiellonian University in Krakow, Poland, 24-27 August 2005
4. Chang, C.Y. (2005) *Intuitive-analysis style and EFL listening strategies*. ARECLS e-journal. <http://www.ecls.ncl.ac.uk/publish/>
5. Chang, C.Y. (2005) *Relating listening strategies to EFL learners' learning styles*. IATEFL Conference Selections 2005.
6. Chang, C.Y. (2006) *TIRF Computer-Based Technology: The Relationship between Individual Learning Styles and Learning Strategies in Electronic Materials for Practicing EFL Listening*. The 40th TESOL Convention and Exhibit, Tampa , 15-19 March 2006
7. Chang, C.Y. and Windeatt, S. (2006) *Can the listening performance of intuitive/neutral/analytical EFL learners be enhanced by using computer-based listening materials which provide guidance on suitable listening strategies?* EuroCALL, Granada, Spain, 4-7 September, 2006