

Speech monitoring in language production: The effects of anxiety

Dr. ZHAO Nan Director of MA Conference Interpreting and Translation University of Essex Department of Language and Linguistics 10th July 2018

Conference Interpreting

A series of cognitive processes

- Comprehending the source language
- Producing the target language
- Perform "online"
- A very stressful activity
 - Performed in public
 - Multi-task
 - Time constraint



- Requires stable psychological trait e.g. low anxiety.

Interpreting and anxiety

- Does anxiety affect interpreting? If yes, how?
 - The capacity to control anxiety has traditionally been considered one of the requisites for interpreting (Cooper et al., 1982; Gile, 1995; Klonowicz, 1994; Longley, 1989; Moser-Mercer, 1985; Moser-Mercer et al., 1998) and a predictor of interpreting competence (Alexieva, 1997).
 - Anxiety is intrinsic to interpreting, but its impact is not clearly defined (Brisau et al., 1994).
 - The capacity to control anxiety in interpreting is sometimes taken into account in interpreting entrance exams (Moser-Mercer, 1985).

Studies on anxiety

- According to the attentional control theory of anxiety (Eysenck, Derakshan, Santos, & Calvo, 2007), anxiety
 - increases stimulus-driven attention (i.e., automatic attention to salient things, e.g., a loud sound)
 - decreases goal-driven attention (i.e., attention needed to complete a goal, e.g., interpreting a speech).
 - impairs executive functions such as inhibition, shifting, and updating (see also Miyake et al., 2000).

Studies on anxiety

- Anxiety
 - leads to poor achievement in a foreign language (Ganschow & Sparks, 1996).
 - hinders phonological and orthographic production in the native language (Ganschow & Sparks, 1996).
 - affects syntactic production in a foreign language (Kleinmann, 1977).
 - make people stutter in language production (Messenger et al., 2004)

Studies on foreign language anxiety

• Horwitz et al. (1986)

- Foreign Language Classroom Anxiety Scale (FLCAS) to measure FL anxiety with a focus on speaking. (5-point Likert scale, ranging from "strongly agree" to "strongly disagree.")
- The internal consistency , and test-retest reliability (over 8 weeks) was quite good.
- Aida (1994) validated FLCAS.

Other situation-specific anxiety scale

- English Use Anxiety Scale (Gardner, Smythe, & Brunet, 1977)
- Foreign Language Reading Anxiety Scale (FLRAS) (Saito et al., 1999)
- Foreign Language Listening Anxiety Scale (FLLAS) (Elkhafaifi, 2005)
- Second Language Speaking Anxiety Scale (SLSAS) (Woodrow, 2006)

Studies on interpreting anxiety

- Few empirical studies on the construct of interpreting anxiety
 - Audio anxiety and interpreting anxiety both affected interpreting performance (Kang, 2010, 291 Chinese learners of English).
 - Cassady & Johnson (2002) Cognitive Test Anxiety Scale.

Implications Interpreting teaching & training

- Create individual profiles for students: tailored instructions
- Classroom teaching strategies
 - Audio visual material.
 - Pre-task preparation
 - topics,
 - subject knowledge,
 - audience, speaker background,
 - terminologies,
 - Technologies.
 - Situated learning
 - mock conferences,
 - scenario based interpreting,
 - role play in pair-up practice.

Implications

Interpreting teaching & training

- Help students with high anxiety find their confidence in class
 - Use dubbing as an ice-breaker.
 - Encouraging oral and written feedback.
 - Find out what the student is confident in.
 - Break down the skills of interpreting to identify what exactly hinders a student's confidence.
 - Using one-on-one tutorials to provide tailored training to help improve certain skills.
 - Video record and play back a well prepared task once a term.

• Self-training

- Stand on a chair
- Dress-up (feel good and recreate a professional atmosphere)
- Talk from a corner (voice projection)
- Do a task with a time limit
- Written feedback from peers

Implications Foreign language learning

- Poor FL performance could be caused by anxiety
 - Speaking.
- Anxiety hinders language comprehension
- Public speaking modules
 - presentation,
 - pacing and
 - strategic use of disfluencies.



References

- Acheson, D. J., & MacDonald, M. C. (2009). Verbal Working Memory and Language Production: Common Approaches to the Serial Ordering of Verbal Information. *Psychological Bulletin*, 135(1), 50-68.
- Baddeley, A. (1996). The fractionation of working memory. *Proceedings of the National Academy of Sciences, 93*(24), 13468-13472.
- Baddeley, A. (2010). Working memory. *Current Biology, 20*(4), R136-R140.
- Baddeley, A. (2012). Working memory: theories, models, and controversies. *Annual Review of Psychology, 63*, 1-29.
- Barik, H. C. (1975). Simultaneous interpretation: Qualitative and linguistic data. *Language and Speech, 18*(3), 272-297.
- Blacfkmer, E. R., & Mitton, J. L. (1991). Theories of monitoring and the timing of repairs in spontaneous speech. *Cognition*, *39*(3), 173-194.
- Bock, J. K. (1986). Syntactic persistence in language production. *Cognitive Psychology, 18*, 355-387.
- Bock, J. K., & Levelt, W. J. M. (1994). Language production: Grammatical encoding. In M. A. Gernsbacher (Ed.), *Handbook of psycholinguistics* (pp. 945-984). San Diego: Academic Press.

- Butterfield, E. C., Hacker, D. J., & Plumb, C. (1994). Topic knowledge, ٠ linguistic knowledge, and revision processes as determinants of text revision. Advances in cognition and Educational Practice, 2, 83-141.
- Chen, H.-C. (1990). Lexical processing in a non-native language: Effects of language proficiency and learning strategy. *Memory & Cognition, 18*(3), 279-288.
- Christoffels, I. K., de Groot, A., & Kroll, J. F. (2006). Memory and language skills in simultaneous interpreters: The role of expertise and language proficiency. Journal of Memory and Language, 54(3), 324-345.
- Christoffels, I. K., de Groot, A., & Waldorp, L. J. (2003). Basic skills in a • complex task: A graphical model relating memory and lexical retrieval to simultaneous interpreting. *Bilingualism: Language and Cognition, 6*(03), 201-211.
- Clahsen, H., & Felser, C. (2006). Grammatical processing in language • learners. Applied Psycholinguistics, 27(01), 3-42.
- Clark, H. H., & Fox Tree, J. E. (2002). Using uh and um in spontaneous speaking. Cognition, 84(1), 73-111.
- Clark, H. H., & Wasow, T. (1998). Repeating words in spontaneous speech. • *Cognitive Psychology, 37*(3), 201-242.

- Cole, R. A. (1973). Listening for mispronunciations: A measure of what we hear during speech. *Perception & Psychophysics*, 13(1), 153-156.
- Costa, A., Caramazza, A., & Sebastián-Gallés, N. (2000). The cognate facilitation effect: Implications for models of lexical access. *Journal of Experimental Psychology: Learning, Memory and Cognition, 26*, 1283-1296.
- Dell, G. S. (1986). A spreading-activation theory of retrieval in sentence production. *Psychological Review*, *93*, 283-321.
- Dijkstra, T., Grainger, J., & Van Heuven, W. J. (1999). Recognition of cognates and interlingual homographs: The neglected role of phonology. *Journal of Memory and Language*, 41(4), 496-518.
- Dong, Y., & Cai, R. (In press). Woring memory in interpreting. In Z. Wen, M. Mota & A. McNeill (Eds.), *Working Memory in Second Language Acquisition and Processing: Theory, Research and Commentary*.
- Dong, Y., & Lin, J. (2013). Parallel processing of the target language during source language comprehension in interpreting. *Bilingualism: Language and Cognition*, *16*(03), 682-692.

- Ferreira, F. (2000). Syntax in language production: An approach using treeadjoining grammars. In L. Wheeldon (Ed.), *Aspects of language production*. (pp. 291-330). Philadelphia, PA, US: Psychology Press/Taylor & Francis.
- Fox Tree, J. E., & Schrock, J. C. (2002). Basic meanings of *you know* and *I mean*. *Journal of Pragmatics, 34*(6), 727-747.
- Gerver, D. (1974). The effects of noise on the performance of simultaneous interpreters: Accuracy of performance. *Acta Psychologica*, *38*(3), 159-167.
- Gile, D. (1995). Fidelity assessment in consecutive interpretation: An experiment. *Target, 7*(1), 151-164.
- Gósy, M. (2007). Disfluencies and self-monitoring. *Govor, 24*(2), 91-110.
- Ivanova, I., Pickering, M. J., Branigan, H. P., McLean, J. F., & Costa, A. (2012). The comprehension of anomalous sentences: Evidence from structural priming. *Cognition*, *122*, 193–209.
- Jackendoff, R. (1983). *Semantics and cognition*. Cambridge, MA: MIT Press.
- Jiang, N. (2000). Lexical representation and development in a second language. *Applied linguistics, 21*(1), 47-77.
- Johnson-Laird, P. N. (1983). *Mental models*. Cambridge: Cambridge University Press.

- Kormos, J. (2000). The role of attention in monitoring second language speech production. *Language Learning*, *50*(2), 343-384.
- Levelt, W. J. M. (1983). Monitoring and self-repair in speech. 14, 41-104.
- Levelt, W. J. M. (1989). *Speaking: From intention to articulation*. Cambridge, MA: MIT Press.
- MacDonald, M. C., Pearlmutter, N. J., & Seidenberg, M. S. (1994). The lexical nature of syntactic ambiguity resolution. *Psychological Review*, *101*(4), 676-703.
- Macizo, P., & Bajo, M. T. (2004). When Translation Makes the Difference: Sentence Processing in Reading and Translation. *Psicologica: International Journal of Methodology and Experimental Psychology, 25*(1), 181-205.
- Mead, P. (2000). Control of pauses by trainee interpreters in their A and B languages.
- Moser-Mercer, B., Künzli, A., & Korac, M. (1998). Prolonged turns in interpreting: Effects on quality, physiological and psychological stress (Pilot study). *Interpreting,* 3(1), 47-64.
- Pöchhacker, F. (1995). "Those Who Do...": A Profile of Research (ers) in Interpreting. *Target*, *7*(1), 47-64.
- Pöchhacker, F. (2004). *Introducing interpreting studies*: Psychology Press.
- Postma, A. (2000). Detection of errors during speech production: A review of speech monitoring models. *Cognition*, 77, 97-131.

- Tzou, Y.-Z., Eslami, Z. R., Chen, H.-C., & Vaid, J. (2011). Effect of language proficiency and degree of formal training in simultaneous interpreting on working memory and interpreting performance: Evidence from Mandarin–English speakers. *International Journal of Bilingualism*, 1367006911403197.
- Yudes, C., Macizo, P., Morales, L., & BAJO, M. T. (2013). Comprehension and error monitoring in simultaneous interpreters. *Applied Psycholinguistics*, *34*(05), 1039-1057.
- Zhang, Q. (2010). *Mechanisms of deverbalization in consecutive interpreting: An experimental study on novice interpreters.* (PhD), Guangdong University of Foreign Studies.
- 仲伟合,穆雷. (2008). 翻译专业人才培养模式探索与实践 [J]. 中国外语, 6(3).
- 刘永灿. (2003). 记笔记功能的认知心理研究——中国学生听英语讲座时记笔记的编码功能和外储存功能. 现代外语, 26(2), 193-199.
- 叶舒白, 刘敏华. (2006). 口译评分客观化初探: 采用量表的可能性. *国立编译馆 馆刊*, 4, 57-78.
- 王斌华. (2011). 口译能力的评估模式及测试设计再探—以全国英语口译大赛为 例. 外语界, 142期, 66-71.
- 董燕萍, 蔡任栋, 赵南, 林洁绚. (2013). 学生译员口译能力结构的测试与分析. *外国语: 上海外国语大学学报*(4), 75-85.
- 赵南, 董燕萍. (2013). 基于多面 Rasch 模型的交替传译测试效度验证. *解放军外 国语学院学报*(1), 86-90.



Thank you for your attention.

Questions are welcome.