

Using timed free-writing To measure L2 learners' implicit morpho-syntactic knowledge

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1. Implicit and explicit knowledge

- Definitions
 - Explicit knowledge is “the conscious awareness of what a language or language in general consists of and/or of the roles that it plays in human life.” (Ellis, 2004, p. 229)
 - “Implicit knowledge of a language is knowledge that is intuitive and tacit. It cannot be directly reported. The knowledge that most speakers have of their L1 is implicit.” (Ellis, 1994, p. 707)
- “*Linguistic competence* comprises implicit knowledge” (Ellis, 2005, p. 143)

2. Measuring implicit knowledge

- Implicit knowledge cannot be directly measured.
- Influence of explicit knowledge needs to be minimized in data collection.
- Free production data
 - “The ideal measure of implicit knowledge is probably ‘free production’” (Ellis, Loewen, Elder, Erlam, Philp, & Reinders, 2009, p. 28)
 - Problems of free production data
 - ✧ Lack of practicality
 - ✧ Lack of generalizability due to (usually) small sample size
 - ✧ “Avoidance” (Schachter, 1974)
- Other measures
 - Grammaticality judgment test (GJT)
 - ✧ Strong influence of explicit knowledge (if untimed)
 - Neurophysiological data (e.g., eye-tracking, ERP, PET, fMRI)
 - ✧ Lack of practicality
 - ✧ Construct validity not established (Shirahata, Wabayashi, & Muranoi, 2010, p. 231)

3. Test batteries developed by Ellis and his colleagues

- Ellis (2005)
 - Tests of explicit knowledge
 - ✧ Untimed GJT
 - ✧ Metalinguistic knowledge test
 - Tests of implicit knowledge
 - ✧ Timed GJT
 - ✧ Imitation test
 - ✧ Oral narrative test
- For more information, see Ellis (2004, 2006), Ellis et al. (2009), and Erlam (2006).

4. Purpose

- The purpose of this study is to improve the method for collecting free production data.
 - Use of timed free-writing

5. Method

- Participants
 - 11 Japanese-speaking university students (see Urano, 2011a, for more information)
- Procedure
 - A 10-minute free-writing task was given in the beginning of a weekly writing lesson.
 - The topic was presented just before the task.
 - ◇ Where did you go during the Golden Week holidays?
 - ◇ Choose a person from your family, and describe him/her.
 - ◇ What is your favorite food?, etc.
 - Importance of the quantity (i.e., number of words) was emphasized to reduce the use of explicit knowledge.
 - Handwritten compositions were typed and archived into a learner corpus.
 - Data from 12 sessions were used for the present study.
 - ◇ A total of 15,117 words
 - 1,374 words per participant ($SD = 404$)
 - 122 words per session/participant ($SD = 28$)
 - (For comparison) Nagoya Interlanguage Corpus of English 2.0 (Sugiura et al., 2011)
 - ◇ Typed essays written in one hour
 - ◇ A total of 116,135 words
 - 339 words per participant
- Characteristics of the learner corpus for the present study
 - Compared with other studies with free production data
 - ◇ Larger sample size
 - Individual differences can be examined.
 - Inferential statistics with means and standard deviations can be used.
 - ◇ Written rather than spoken production data
 - More influence of explicit knowledge
 - Compared with other learner corpora
 - ◇ Larger number of words per person
 - Higher frequency for each of the linguistic structures to be tested
 - ◇ Larger number of words per minute
 - Less influence of explicit knowledge
- Analysis
 - Seven grammatical structures were selected from the 17 structures used in Ellis (2005, 2006)
 - ◇ 3rd-person singular *-s*
 - ◇ Possessive *'s*
 - ◇ Past tense *-ed*
 - ◇ Comparative
 - ◇ Embedded questions
 - ◇ Adverb placement
 - ◇ Question tags
 - Accuracy was calculated.

6. Results

	Obligatory Occasions	Accuracy (%)	Accuracy (%) in Ellis (2006)
adverb placement	166	100	63
possessive	18	(89)	61
comparative	10	(60)	54
past tense	719	76	50
3rd-person singular	487	91	46
embedded questions	5	(60)	45
question tags	2	(100)	41

7. Discussion

- The number of obligatory occasions varied greatly.
 - Free production data are not appropriate for certain grammatical structures.
 - ✧ possessive 's: 18
 - ✧ comparatives: 10
 - ✧ embedded questions: 5
 - ✧ question tags: 2
 - Production of such structures can be “pushed” by providing contexts which encourage the use of those structures (e.g., oral narrative test in Ellis, 2005, 2006).
 - ✧ But this might increase the influence of explicit knowledge.
- The accuracy order of the present study is different from that of Ellis (2006).
 - A high accuracy for 3rd-person singular –s was found in the present study while it was one of the “difficult” structures in Ellis (2006).
 - ✧ Possible influence of explicit knowledge in a written production task.
- A note on adverb placement
 - A near-perfect accuracy was found for adverb placement in the present study, and it was one of the “easy” structures in Ellis (2006).
 - However, a metalinguistic test administered to the same participants revealed that four out of 11 did not have explicit knowledge of adverb placement (see Urano, 2011a).
 - Also, timed and untimed GJTs conducted by Urano (2011b) found rather low accuracy scores for adverb placement.
 - ✧ Timed GJT: 26.6%
 - ✧ Untimed GJT: 31.6%
 - ✧ The participants could not detect grammatical errors in the test sentences.
 - Production data may not be a good measure for the knowledge of what is ungrammatical.

8. Summary

- Compared to other types of free production data, timed free-writing can be used with a larger sample size.
 - We can compare individual learners.
 - We can use inferential statistics to generalize the findings.
- However, there are certain drawbacks.
 - It cannot be used for structures with few obligatory occasions.
 - The influence of explicit knowledge may be stronger than in spoken data.
 - It cannot test the learner knowledge of what is *not* possible in certain structures.

9. References

- Ellis, R. (1994). *The study of second language acquisition*. Oxford: Oxford University Press.
- Ellis, R. (2004). The definition and measurement of explicit knowledge. *Language Learning*, 54, 227-275.
- Ellis, R. (2005). Measuring implicit and explicit knowledge of a second language: A psychometric study. *Studies in Second Language Acquisition*, 27, 141-172.
- Ellis, R. (2006). Modelling learning difficulty and second language proficiency: The differential contributions of implicit and explicit knowledge. *Applied Linguistics*, 27, 431-463.
- Ellis, R., Loewen, S., Elder, C., Erlam, R., Philp, J., & Reinders, H. (2009). *Implicit and explicit knowledge in second language learning, testing and teaching*. Bristol: Multilingual Matters.
- Erlam, R. (2006). Elicited imitation as a measure of L2 implicit knowledge: An empirical validation study. *Applied Linguistics*, 27, 464-491.
- Schachter, J. (1974). An error in error analysis. *Language Learning*, 24, 205-214.
- Shirahata, T., Wakabayashi, S., & Muranoi, H. (2010). 『詳説 第二言語習得研究: 理論から研究法まで』 (*Detailed explanation of second language acquisition research: From theory to methodology*). 東京: 研究社.
- Sugiura, M. et al. (2011). *NICE: Nagoya interlanguage corpus of English 2.0*. <http://sugiura5.gsid.nagoya-u.ac.jp/~sakaue/nice/>
- Urano, K. (2011a). 「知っているのに使えない: 明示的文法知識が正確な言語使用に結びつかないケース」 (“I can’t use it even though I know it”: When explicit grammatical knowledge does not lead to accurate use). 横田秀樹 (編), 『第二言語習得研究の成果とその英語教育への応用: 中部地区英語教育学会2007年~2009年度課題別研究プロジェクト報告書』, pp. 29-39.
- Urano, K. (2011b). 「普遍文法に基づいた第二言語習得研究における時間制限のある文法正判断タスクの利用」 (Using timed grammaticality judgment tasks in generative second language acquisition research). 第37回全国英語教育学会山形研究大会口頭発表 (山形市).