

Global English Teachers Association 2020 Conference

# Cognitive Individual Differences and L2 Learning



# GETA

기간: 2020년 12월 16일~19일

학술대회 홈페이지 <https://imkb615.wixsite.com/geta2020conference>

주최: 글로벌영어교육학회

Global English Teachers Association

<http://www.geta.kr>

후원: 한국연구재단



이 발표 논문집은 2020년도 정부재원(교육부)으로  
한국연구재단의 지원을 받아 발간되었음.



글로벌영어교육학회 2020 국제학술대회



Global English Teachers Association (GETA)  
2020 International Conference

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# Cognitive Individual Differences and L2 Learning

Global English Teachers Association 2020 Conference



2020.12.16~19 (FOUR DAYS)

Go to <http://www.geta.kr> and click "Conference"

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1. Shaofeng Li (Florida State University):  
Language Aptitude in L2 Learning



4. Eunice Eunhee Jang (University of Toronto):  
Advancing Holistic Assessment of Young Learners'  
Cognitive, Metacognitive, and Psychological  
Orientations through Artificial Intelligence



2. Zhisheng Edward Wen (Macao  
Polytechnic Institute): Working Memory in  
L2 Research and Practice: Theoretical and  
Methodological Considerations



5. Alexis Lopez (Educational Testing Service)  
Examining the use of scenario-based assessment to  
measure the English language proficiency of young  
learners



3. YouJin Kim (Georgia State University  
/KAIST): Engagement and Motivation in  
Task-Based Language Teaching:  
Bringing Research to the Classroom



6. Jookyoung Jung (Chinese University of Hong  
Kong): The Impact of Textual and Task  
Manipulation on L2 Learning from Reading

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GLOBAL ENGLISH TEACHERS ASSOCIATION



My deepest appreciation goes to all the presenters including the plenary and featured speakers for their time and efforts. Stay safe!

Jaemyung Goo, President of GETA

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# 2020 GETA Annual Conference

## Cognitive Individual Differences and L2 Learning

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### Plenary Speeches

Presenter	Title
Shaofeng Li (Florida State University)	Language Aptitude in L2 Learning (pp. 1–17)
Zhisheng (Edward) Wen (Macao Polytechnic Institute)	Working Memory in L2 Research and Practice: Theoretical and Methodological Considerations (pp. 18–40)
YouJin Kim (Georgia State University/KAIST)	Engagement and Motivation in Task-Based Language Teaching: Bringing Research to the Classroom (pp. 41–82)
Eunice Eunhee Jang (University of Toronto)	Advancing Holistic Assessment of Young Learners’ Cognitive, Metacognitive, and Psychological Orientations Through Artificial Intelligence (pp. 83–104)

### Featured Speeches

Presenter	Title
Alexis Lopez (Educational Testing Service)	Examining the Use of Scenario-Based Assessment to Measure the English Language Proficiency of Young Learners (pp. 105–141)
Jookyoung Jung (Chinese University of Hong Kong)	The Impact of Textual and Task Manipulation on L2 Learning from Reading (pp. 142–178)

### Paper Presentations

Presenter(s)	Title
Hyeok Jin Cheon (Chonnam National University)	The Effects of Repeated Reading on Reading Comprehension in Different Text Conditions (pp. 179–189)
Adriane Geronimo (Midland Senior High School)	Addressing Cognitive Differences in the Memorization of L2 Vocabulary (pp. 190–201)

Kyungjin Hwang (University of South Carolina)	A Case Study of an EFL Reader: Using Miscue Analysis and Retrospective Miscue Analysis for Teaching Reading (pp. 202–204)
Taehee Kim & Mae-Ran Park (Pukyong National University)	The Qualitative Study of the Use of Connectors in Intermediate English Writing by Korean College Students (pp. 205–218)
Nanyun Li <sup>1,2</sup> & Hyesook Park <sup>1</sup> ( <sup>1</sup> Kunsan National University, <sup>2</sup> Jiujiang University)	A Review of Research on Learner Autonomy over the Past 20 Years in China (pp. 219–224)
Jiayi Min & Moonyoung Park (Chinese University of Hong Kong)	Investigating Test Practices and Washback Effects: Implications for Primary School English Teachers in Hong Kong (pp. 225–234)
Ian Moodie (Mokpo National University)	How the Local Context Mediates Motivations for Teaching English in Korean Primary Schools (pp. 235–241)
Dennis Murphy Odo (Pusan National University)	The Effectiveness of Phonological Awareness and Phonics Instruction for Word and Pseudo Word Reading of English as an L2: A Quantitative Meta-analytic Review (pp. 242–248)
Eunseok Ro (Kangwon National University)	Reorientation of Noticing and Output: A Case Study of Tracking a Teaching Object During an IELTS Consultation (p. 249)
Wei Shen <sup>1</sup> & Hyesook Park <sup>2</sup> ( <sup>1</sup> Northeast Electric Power University, <sup>2</sup> Kunsan National University)	The Relationships Among Chinese EFL Learners' Metacognitive Strategies, Working Memory Capacity, L2 Vocabulary Knowledge in L2 Reading Comprehension (pp. 250–259)
Takaaki Takeuchi (Aichi University of Education)	The Effects of Elaborated and Simplified Texts on Reading Comprehension (pp. 260–267)
고은혜 (제주대학교)	인공지능과 영어학습: 정책 및 기존 연구 분석을 중심으로 (pp. 268–273)
고지은, 최윤덕, 이해문 (성균관대학교)	환경과 어학능력점수에 따른 한국 성인 학습자들의 영어불안감 양상 (pp. 274–281)
김혜정 (국민대학교)	효율적인 대학 온라인 수업을 위한 연구: 영화를 활용한 영어 독해 수업을 중심으로 (pp. 282–292)
박선영 (광주태봉초등학교)	동료 코칭을 통한 초등 영어 교사의 정체성 탐색 (pp. 293–297)
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이혜진 (원광대학교)	ONE PASS: 중등영어교사 임용시험 어플 (pp. 303-309)
한다운 (광주교육대학교)	AI 챗봇 활용이 한국 고등학생의 영어 말하기 능력 및 흥미와 학습 동기에 미치는 영향 (pp. 310-311)
한은지 & 김경자 (조선대학교)	영어 사교육에 대한 학부모의 인식 조사 (pp. 312-316)
오마리아 (전주교육대학교)	카카오톡 메신저와 온라인 화상회의 줌을 활용한 '교실영어' 수업 연구 (pp. 317-322)



## **Language Aptitude in L2 Learning**

Shaofeng Li

(Florida State University)

Language aptitude refers to a set of cognitive abilities that are predictive of learning rate and ultimate attainment in a second language. Since aptitude's inception in the 1950s, there has been more than six decades of research examining its content and measurement and its associations with other individual difference factors and with learning outcomes. A recent development in aptitude research is the concept of implicit language aptitude—the ability to learn a second language unconsciously. In this talk, I will start by discussing the theoretical models underlying aptitude research, including models on explicit aptitude, the type measured via traditional aptitude tests such as the MLAT, as well as models on the newly emerged implicit aptitude. I will propose a framework accounting for the unique and joint contributions of explicit and implicit aptitude to the process and outcome of second language acquisition. I will proceed to examine the measurement of language aptitude and the empirical evidence for the validity of the construct by applying principles of psychometric assessments. For explicit aptitude, I will focus on predictive validity (whether it is correlated with learning outcomes) and synthesize three streams of research: aptitude and age, the predictive power of aptitude in instructed learning (as found by correlational studies), and the interface between aptitude and treatment effects. For implicit aptitude, which is still in its infancy, I will examine evidence for convergent and divergent validity, which refers to whether measures of implicit aptitude are correlated and whether they are distinct from measures of cognitive abilities in the explicit paradigm, respectively. I will also address the limited, conflicting evidence regarding implicit aptitude's predictive validity and propose ways to resolve issues and advance the research on this original, significant topic. The talk will conclude with implications of aptitude research for second language teaching, learning, and testing.



**Shaofeng Li** is an Associate Professor of Foreign and Second Language Education at Florida State University, USA. He received his Ph.D. in Second Language Studies from Michigan State University. Prior to his current position, he worked as a Senior Lecturer in Applied Linguistics at the University of Auckland, New Zealand. Dr. Li's main research interests include language aptitude, working memory, task-based language learning, corrective feedback, and research methods. His publications have appeared in *Annual Review of Applied Linguistics*, *Applied Linguistics*, *Applied Psycholinguistics*, *Language Learning*, *Language Teaching*, *Language Teaching Research*, *Modern Language Journal*, *Studies in Second Language Acquisition*, *System*, among others. He is on the editorial boards of a number of academic journals in the field.

## Language Aptitude in L2 Learning: A Synthetic Review

Shaofeng Li  
Florida State University  
GETA 2020 Conference

### What Is Language Aptitude?

- Cognitive abilities predictive of learning rate and ultimate attainment in a second language
- Components of traditional aptitude
  - Phonetic coding
  - Language analytic ability
  - Rote memory
- Recent development/cutting edge: implicit aptitude

## Characteristics of Traditional Aptitude (Li, 2015, 2016)

- Not easily changeable but may be subject to experience
- Increases with age
- Uncorrelated with motivation
- Negatively correlated with anxiety
- Distinct from working memory
- Overlaps with but is dissociable from intelligence

## Measures of Language Aptitude

- The Modern Language Aptitude Test (MLAT) (Carroll & Sapon, 1959)
  - **Number Learning:** learn numbers in a new language
  - **Phonetic Script:** learn sound-symbol associations
  - **Spelling Clues:** answer questions about English vocabulary
  - **Words in Sentences:** identify functions of sentence elements
  - **Paired Associates:** memorize word-meaning associations
- Validated with 5,000 foreign language learners
- Initial motive: to select elite learners

# Other Aptitude Tests

- LLAMA (Meara, 2005)
  - Most popular in current research
  - Free
  - Modelled on the MLAT
  - Language neutral
  - Low internal reliability except for LLAMA\_B (Bokander & Bylund, 2019)
- Hi-LAB (Linck et al., 2013)
  - Abilities for high proficiency
  - Significant predictors: rote memory, phonological short-term memory, and serial reaction time
  - Outcome measures: reading and listening

## Perceptions of Aptitude and Actual Aptitude

### ■ Li (2020)

<i>Self-Assessed Aptitude</i>	<i>Actual Aptitude (Scores on Aptitude Test)</i>			
	Overall Aptitude	Phonetic Coding	Analytic Ability	Memory
Overall Aptitude	.25*	.22	.14	.14
Phonetic Coding	.12	.04	-.05	.06
Analytic Ability	.32*	.20	.20	.18
Memory	.32	.12	-.06	.30*

## Theories of Traditional Language Aptitude

- **The Carrollian Approach:** a Behavioristic approach to language learning; represented by the MLAT (Carroll & Sapon, 1959)
- **Aptitude-Treatment Interaction (ATI):** different learning conditions draw on different clusters of cognitive abilities (Robinson, 2011)
- **Fundamental Difference Hypothesis:** children depend on UG and adults on domain-general analytic ability (Bley-Vroman, 1990)
- **The Staged Model:** noticing, patterning, controlling, and lexicalizing (Skehan, 2012)

## Research

- Aptitude and instructed learning (regardless of context): How does aptitude relate to learning outcomes?
- Aptitude and instruction type: How does aptitude relate to the effects of different instructional treatments?
- Aptitude and age: Do child and adult language learning correlate with aptitude differently?

## Aptitude and Instructed Learning

- A strong predictor of L2 proficiency:  $r = .50$  (Li, 2015, 2016). Compare:
  - Working memory:  $r = .25$  (Linck et al., 2013)
  - Motivation:  $r = .37$  (Masgoret & Gardner, 2003)
  - Anxiety:  $r = -.36$  (Teimouri et al., 2019)
  - Intelligence:  $r = .50$  (Neisser et al., 1996)

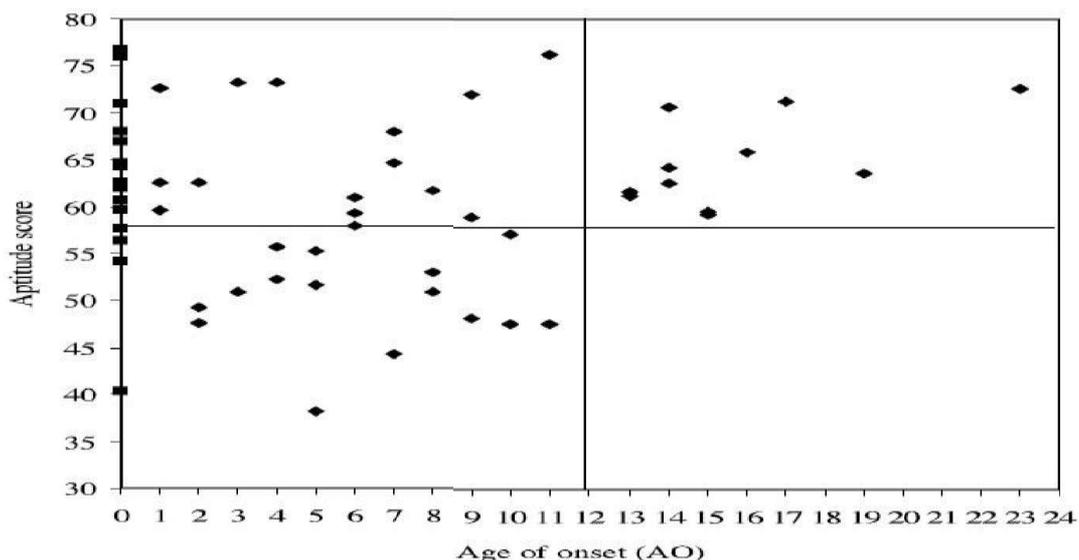
## Aptitude and Instructed Learning

- Stronger correlations for high school learners than university learners (Li, 2015)
  - Aptitude is likely more important for initial learning
  - Similar to the findings for working memory (Cheung, 1996; Serafini & Sanz, 2016)

# Aptitude and Age

- Core statement: adults draw on aptitude while children don't
- Hypothesis 1: Aptitude is correlated with adult SLA but not child SLA
  - Yes: DeKeyser (2000); Granena & Long (2012)
  - No: Abrahamsson & Hyltenstam (2008)
- Hypothesis 2: To achieve high proficiency, early starters don't have to rely on aptitude, but late starters do
  - Yes. Abrahamsson & Hyltenstam (2008); DeKeyser (2000)

## Early and Late Learners with Native-like Proficiency (Abrahamsson & Hyltenstam, 2008)



## Aptitude –Treatment Interaction

- Deductive vs inductive instruction
  - Deductive: rule followed by practice; inductive: rule extrapolated from input material
  - High-aptitude learners benefited more from inductive instruction; low-aptitude learners achieved more through deductive instruction (Erlam, 2005; Hwu et al., 2012)
- Explicit vs. implicit instruction
  - Aptitude is more strongly correlated with the effects of explicit instruction than implicit instruction (Li, 2015), hence the need for implicit aptitude

## Implicit Aptitude: Cutting-Edge

- Implicit aptitude: cognitive abilities for unconscious computation of distributional and transitional probabilities
- Implicit learning
  - As a process or learning outcome—primary focus of research
  - As a cognitive ability—new
- Recent initiatives on implicit aptitude in SLA
  - 2021 special issue of *Studies in Second Language Acquisition*
  - 2021 AAAL colloquium

## Distinguishing Explicit and Implicit learning

- Dual-process theories of learning (Evans & Frankish, 2009)
  - Explicit learning: evolutionarily more recent, rule-based, analytic, fast, flexible, short-lived
  - Implicit learning: more primitive, data-driven, intuitive, slow, inflexible, sustainable
- Evidence for the separation
  - Explicit learning abilities are uncorrelated or negatively with implicit learning (Gebauer & Mackintosh, 2007; Reber et al, 1991; Robinson, 2005)
  - Patients with cognitive deficits in explicit learning have intact implicit learning abilities (Arciuli, 2017) and vice versa (Jiménez-Fernández et al., 2011)

## Implicit Aptitude in SLA Theories

- **Usage-based SLA** (Han, 2020)
  - “The bulk of language acquisition is implicit learning from usage” (Ellis, 2005, p. 306)
  - Language learning is a matter of sequence learning
  - Explicit learning prepares the fodder for implicit learning
- **Interaction Hypothesis**: learning is optimal when input is detected initially and processed implicitly thereafter (Long, 2015)
- **Skill Acquisition Theory**: explicit aptitude facilitates initial learning and implicit aptitude is important in advanced learning (DeKeyser, 2020)

## Summary of Theoretical Claims

- Implicit aptitude makes an independent contribution to SLA
- Implicit aptitude important for complex structures; explicit aptitude for simple structures
- Implicit aptitude important for advanced L2 learning; explicit aptitude for initial learning
- Implicit aptitude is facilitative of both adjacent and non-adjacent structures

## Summary of Theoretical Claims

- Double dissociation: Implicit and explicit aptitude versus implicit and explicit instruction
- Implicit aptitude for grammar; explicit aptitude for vocabulary
- Implicit and explicit aptitude may interfere with each other
- Implicit aptitude may contribute directly to implicit knowledge; explicit aptitude may contribute to implicit knowledge indirectly by providing materials for implicit learning

## Characteristics of Implicit Aptitude

- Componential: not a unitary construct
- Domain general and domain specific
- Developmental: increases with age (Hodel et al., 2014; Saffran, 2001) and does not decline significantly (Ward et al., 2013).
- Subject to experience (Granena, 2013; Potter et al., 2016)

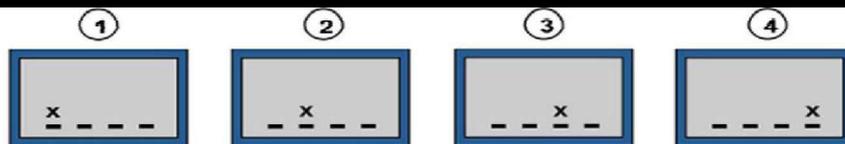
## Components of Implicit Aptitude

- Sensitivity to
  - distributional statistics: frequency
  - transitional probability: co-occurrence
- Selective attention
  - Ability to select relevant input
  - Once selected, input is processed implicitly
  - Involves low levels of awareness

# Measures of Implicit Aptitude

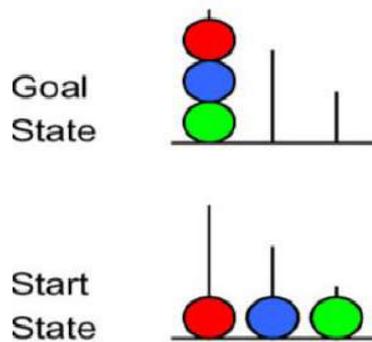
- Sequence learning
  - Serial reaction time: popular and most reliable predictor of learning
  - LLAMA\_D: inconsistent measure of implicit aptitude
  - Artificial grammar (Li, in preparation)
- Syntactic priming (Li, in press)
- Process control (procedural memory)
  - Tower of London
  - Sugar production
  - Weather prediction

## Serial Reaction Time



- Learners respond to a symbol appearing at different locations
- The locations are based on two sequences
  - A: 1-2-1-4-3-2-4-1-3-4-2-3- (target, more frequent)
  - B: 1-2-4-3-1-4-2-1-3-2-3-4- (control, less frequent)
- Learners respond faster to the target sequence

## Tower of London (Kaller et al., 2011)



### Rules

- Can only move one ball
- Can't be moved if another ball on top
- 3 balls can be on 1<sup>st</sup> peg, 2 on the 2<sup>nd</sup> peg and one on the 3<sup>rd</sup> peg
- A test of procedural memory

## Validation of the Construct of Implicit Aptitude

- **Divergent validity:** whether implicit aptitude is uncorrelated with explicit aptitude
  - Yes: implicit aptitude is uncorrelated or negatively correlated with explicit aptitude (Hamrick, 2015; Li, in press; Linck et al., 2013; Suzuki & DeKeyser, 2017; Yi, 2018)
- **Convergent validity:** whether measures of implicit aptitude are correlated
- **Predictive validity:** whether implicit aptitude is predictive of L2 attainment
  - Naturalistic settings: learners are exposed to the L2 in daily life
  - Instructed settings: classroom
    - Correlational
    - Experimental

## Poor Convergent Validity of Implicit Aptitude

- Measures of implicit aptitude are uncorrelated or negatively correlated
  - Li (in press): serial reaction time negatively correlated with syntactic priming
  - Godfroid & Kim (in press): serial reaction time, statistical learning, and Tower of London were uncorrelated
  - Buffington et al. (in press): weather prediction, Tower of London, and serial reaction time were uncorrelated; weather prediction loaded with declarative memory (explicit aptitude)
- Implicit aptitude is multi-dimensional
  - Unlike explicit aptitude or intelligence (e.g., Flaim & Blaisdell, 2020)

## A Modular View of Implicit Aptitude

- Formulate a mapping sentence to clarify the construct
  - “Implicit aptitude is the ability to learn the distributional/transitional relationships between adjacent/non-adjacent structures in verbal/nonverbal stimuli in the visual/auditory modality.” (Li, in press; adapted from Siegelman et al., 2017)
- Also specify the predicted domain of L2 knowledge and the L2 skill

## Predictive Validity

- Naturalistic learning
  - Important for learners with longer residence (Granena, 2013; Suzuki & DeKeyser, 2015, 2017; Yi, 2018) or homogeneous backgrounds (Godfroid & Kim, in press); only correlated with agreement structures (Granena, 2013)
- Instructed learning
  - Correlational research: correlated with high proficiency (listening and reading) (Linck et al., 2013) and implicit or procedural knowledge (e.g. oral production) (Granena, 2019; Saito, 2019; Suzuki, in press)
  - Experimental research
    - Natural language: implicated under implicit conditions in highly controlled experimental studies (Yilmaz & Granena, 2019)
    - Artificial language: associated with later stages of learning under incidental conditions (Hamrick, 2015; Morgan-Short et al., 2014)

## Relation to Fundamental Difference Hypothesis

- Fundamental Difference Hypothesis: children draw on implicit aptitude while adults rely on explicit aptitude
- Research: counter evidence for the Fundamental Difference Hypothesis
  - Implicit aptitude is predictive of both child and adult learning (Yilmaz and Granena, 2019; Morgan-Short et al., 2014)
  - Explicit aptitude is predictive of both child and adult learning (Abrahamsson & Hyltenstam, 2008; Kiss & Nikolov, 2005; Roehr-Brackin & Tellier, 2019)
  - Adults have stronger implicit and explicit aptitude than children (Hodel et al., 2014; Thomas et al., 2004)
- Possible explanations (Li & DeKeyser, in press)
  - Adults may have lost some aspects of implicit aptitude
  - Implicit aptitude measured through psychometric tasks is domain general

# Pedagogical Implications

- Uses of aptitude scores
  - Select learners
  - Diagnose learning disabilities
  - Placement
  - Advise students
- Utility of implicit aptitude
  - Aptitude tests must include implicit aptitude
  - Learners with weak explicit aptitude may have strong implicit aptitude
- Accommodating learners with different aptitude profiles
  - Mix explicit and implicit instruction
  - Mix inductive and deductive instruction

## **Working Memory in L2 Research and Practice: Theoretical and Methodological Considerations**

Zhisheng (Edward) Wen  
Macao Polytechnic Institute

Working memory (WM) refers to our cognitive capacity to temporarily and simultaneously store and process a limited amount of information in our mind to complete some ongoing mental tasks. Inspired by previous research in cognitive psychology and psycholinguistics, the past three decades have also witnessed an increasing body of empirical studies exploring the role WM plays in second language acquisition (SLA) and processing. Empirical evidence accumulating from both individual studies and systematic meta-analyses is pointing to significant albeit moderate effects of WM on L2 acquisitional domains, sub-skills processing, and developmental stages. The current talk sets out to synthesize these emerging results and findings lending support to the portrayal of the ‘WM-SLA nexus’ (Wen, 2016), as well as scrutinizing prevalent WM measures and assessment procedures implemented in current SLA research. Overall, it is argued that WM plays an integral role in both native and second language learning and processing, and that future research needs to expand on Baddeley’s structural view of WM to incorporate the complementary ‘functional’ views. Towards the end, I call for collaborative work between cognitive psychologists and applied linguists to conceptualize and measure WM as a complex, dynamic, and adaptive cognitive system that modulates and shapes aspects of L2 acquisition, processing, and long-term development.



**Zhisheng (Edward) Wen** obtained his Ph.D. in applied linguistics from the Chinese University of Hong Kong (Supervisor: Prof. Peter Skehan) and is currently an Associate Professor in the School of Languages and Translation at Macao Polytechnic Institute in MACAU SAR, China. Dr. Wen has over 20 years of teaching and teacher education experience at universities. His research interests lie in second language acquisition, task-based language teaching and learning, psycholinguistics and cognitive science, with a particular focus on the roles of working memory and language aptitude in SLA. Dr. Wen has published extensively in these areas in academic journals and edited volumes. His recent books include

*Working memory in second language acquisition and processing* (Multilingual Matters, 2015), *Working memory and second language learning* (Multilingual Matters, 2016), *Language aptitude* (Routledge, 2019), and *Researching L2 task performance and pedagogy* (John Benjamins, 2019). Forthcoming books include *Cognitive individual differences in second language acquisition* (de Gruyter Mouton, 2021) and *Cambridge handbook of working memory and language* (Cambridge University Press, 2021).

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# Working Memory in L2 Research and Practice

## Theoretical and Methodological Considerations

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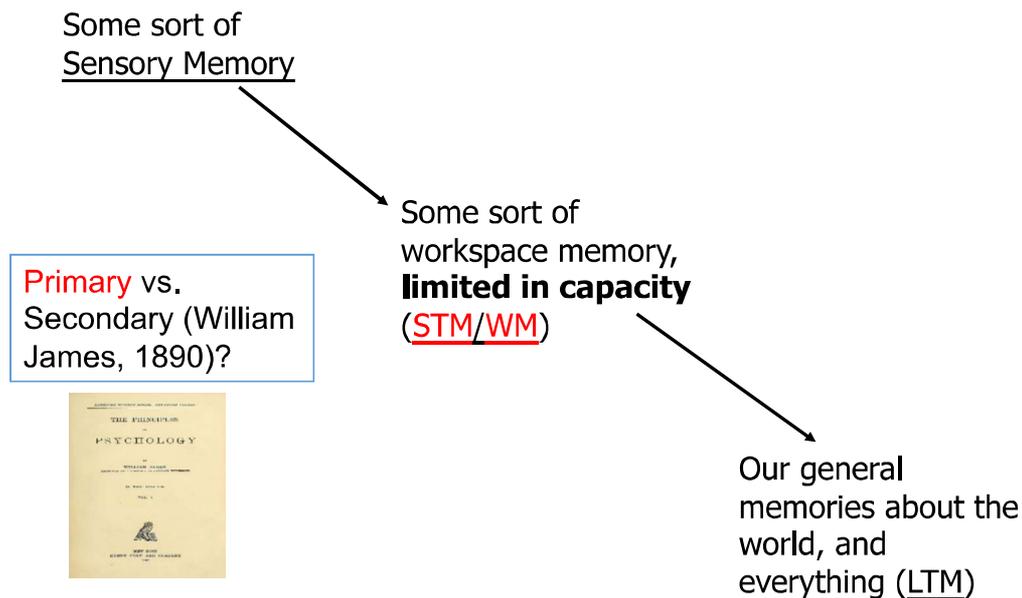


## Outline

- 1. Introduction:** Evolution of the WM concept and key theoretical models
  - Nature: Limited Capacity (e.g. The magical number 4-7)
  - Structure/Components (e.g. Baddeley's Multi-component Model)
  - Executive Functions (e.g. Cowan's and Engle's Models)
- 2. Theoretical Framework:** A **Taxonomy of WM** in First and Second Language
  - An Integrated model of WM & SLA: **The P/E Model**
  - Measuring WM: **Simple & Complex memory span tasks**
- 3. Converging Evidence:** WM and L2 Empirical Studies
  - Overall main effects of WM on SLA: Meta-Analyses
  - Specific strands of the WM-SLA Nexus: The P/E Model
- 4. Implications of L2 Research and Practice**
  - General Implications for SLA acquisitional domains and L2 sub-skills
  - Specific Implications for L2 task performance research
- 5. Conclusion and Future Directions**
  - **Working memory as language aptitude:** A research agenda

# An outline of human memory systems

Short-term/working memory as **Primary** Memory (James, 1890; Waugh & Norman, 1990)



## Working Memory as centred cognition/mind (Carruthers, 2005)

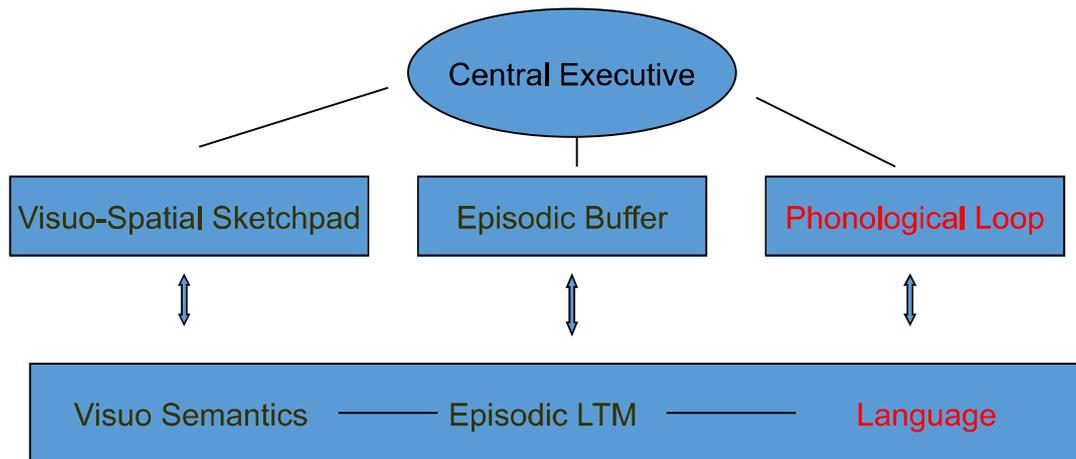
- Multiple 23 by 18 orally (say it out how to do that step by step)
- Is “Rats live on no evil star” a palindrome? (or: 2017102?)
- A famous riddle in Economics 101

A woman is on one side of a river bank with a wolf, a goat, and a cabbage. She wants to get to the other side of the river but the boat she can use only allows her to take one thing with her. But if left alone together, the wolf will eat the goat; the goat will eat the cabbage. How can she solve her problem?

→ WM: our ability to temporarily maintain and manipulate a small amount of information (e.g. linguistic) in our immediate consciousness during cognitive activities.

# The Multi-Component Model of Working Memory

1. *WM as multi-componential*
2. *The **Phonological Loop (PWL)** as a Language Learning Device*  
(Baddeley & Hitch, 1974 & 2021; Baddeley, 2003 & 2015 in Wen et al. Chapter 1)



# The Attention Model of Working Memory

1. *The Embedded-Processes WM Model (Cowan 1988, 1999, 2015 in Wen et al. Chapter 2)*
2. *The Magical Number  $4 \pm 1$  chunks of info (2001)*

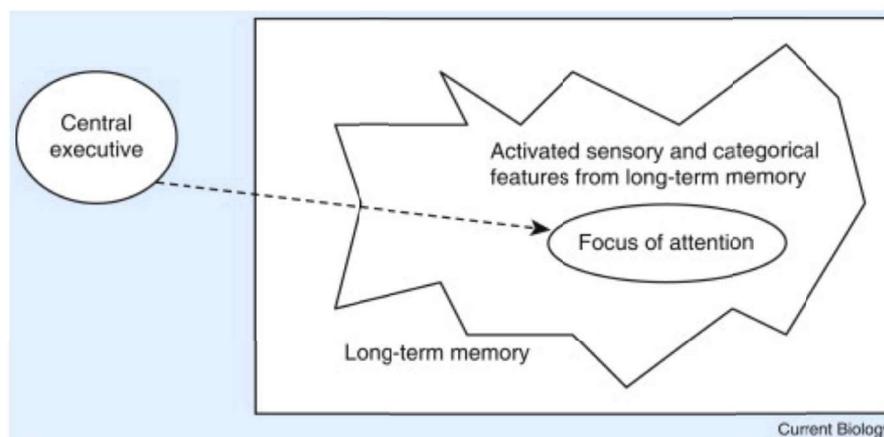


Figure 5. Cowan's Model of Working Memory

# The Executive Control Model of Working Memory

Michael Bunting & Randy Engle: *Foreword* to Wen et al., 2015

## □ Randall Engle & Michael Kane's Inhibitory Control Model

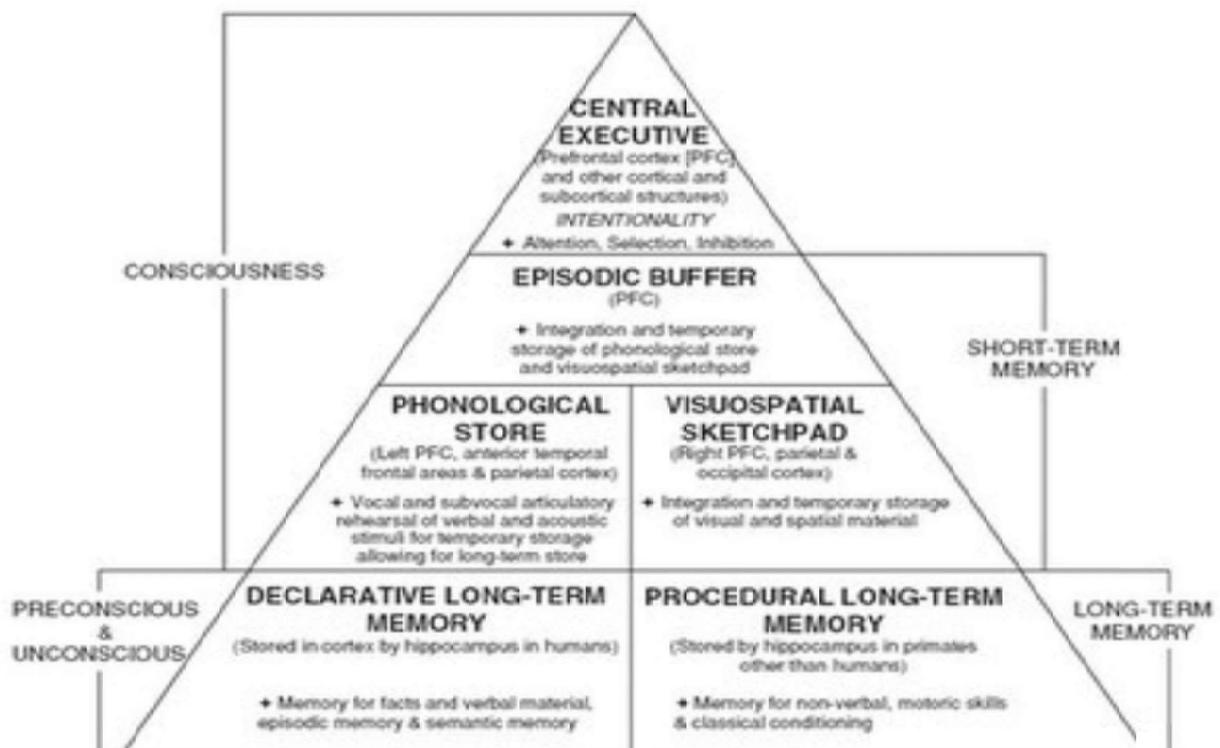
□ Working memory is about the ability to **control attention (esp. inhibitory control)** in order to maintain task-relevant information in an active, quickly retrievable state, and **inhibit** task-irrelevant information

→ WM is a domain-general capacity (task independent)

→ The operation span task

## A Neurocognitive Model of Working Memory

Multiple Components & Executive Functions (Coolidge & Wynn, 2009; 2021)

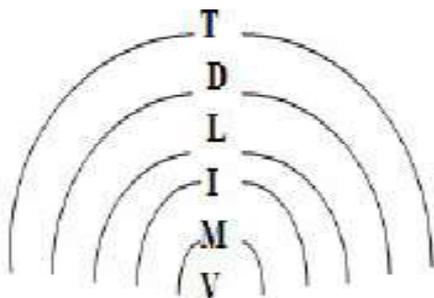


A Taxonomy of Working Memory  
 For Language, Bilingualism, and Cognition  
 (Wen, in prep., CUP 'Elements in SLA' series)

- **A Taxonomy of WM in Language, Bilingualism & Cognition** (Wen, 2016 & in prep)
  - **Limited capacity** (Signature Feature; Carruthers, 2013, 2015)
    - Span (**4-7** chunks or units of info; Miller, 1956:  $7\pm 2$ ; Cowan, 2001:  $4\pm 1$ ; Lu & Wen, 2021)
    - Time/Duration (last for about **20 seconds**; cf. rehearsal/repetition to offset)
    - cf. The **now or never bottleneck effect** (Christiansen & Chater, 2018)
    - **Less is more?** (Brooks & Kempe, 2020) OR **More is better?** (Miyake & Friedman, 1998)
  - **Multiple components/functions** (Domain-specific & Domain General; Williams, 2012)
    - Baddeley (2012 & 2015): **Phonological Loop (PWM)**; Visuo-Spatial Sketchpad; **Central Executive (EWM)**; Episodic Buffer
    - Measures: **Simple** vs. **Complex** memory span tasks
  - **(Activated) Long-term Memory is integral** (cf. LTM as 'Secondary memory')
    - Bilingual LTM: L1 competence & L2 proficiency/knowledge
    - Declarative/Procedural LTM (Ullman, 2001, 2005 & 2012)
    - Caveat: **L1-L2 dynamic interactions** (as L2 proficiency progresses)?

Short-term/Working Memory Limitations  
 as Language Universals?

(The Magical Number 7; Lu, 2013; Lu & Wen, 2021; cf. Miller, 1956)



- |    |             |                                           |
|----|-------------|-------------------------------------------|
| 1: | T D L I M V | : Japanese, Korean, Basque                |
| 2: | T L I M V D | : Chinese                                 |
| 3: | T D M V I L | : Tagalog                                 |
| 4: | T D V M I L | : Hebrew                                  |
| 5: | T V M I L D | : Latvian                                 |
| 6: | V M I L D T | : English, Portuguese, Vietnamese, Yoruba |

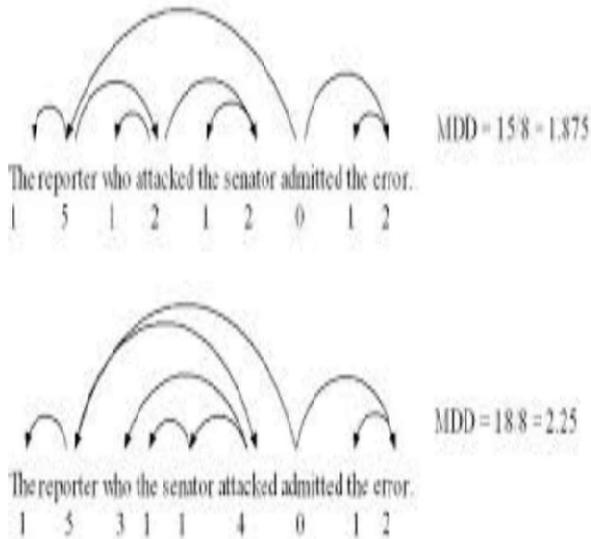
# Short-term/Working Memory Limitations

## Dependency Grammar (MDD) (The Magical Number 4; cf. Cowan)

(Liu Haitao 2008, N=20 languages; cf. Liu et al., 2017; Ted Gibson et al., 2019 Cogniton)

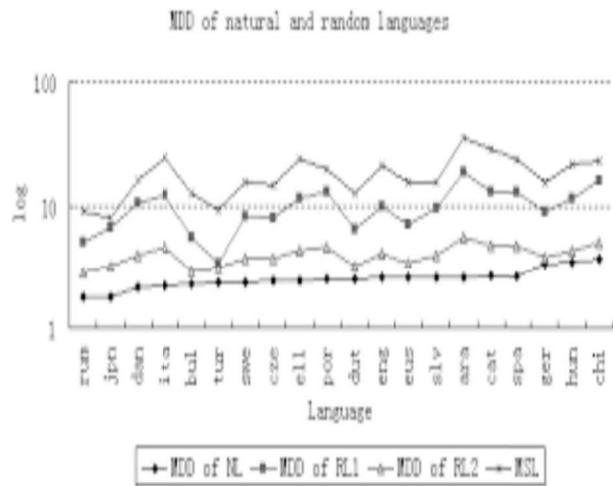
Liu (2008) not only observes a similar phenomenon but further posits the notion of **mean dependency distance (MDD)** of an entire sentence can be defined as follows:

$$\text{MDD (the sentence)} = \frac{1}{n-1} \sum_{i=1}^{n-1} |DD_i|$$



Liu (2008) summarizes that each language has its own overall MDD usually **less than 4**. For example, Romania has the lowest MDD = 1.798; English is at the middle, 2.543; while **Chinese** has the highest, 3.662.

→ Thus, MDD is sensitive to WM limits of 4



## Working Memory Limitations in Constraining Language Design & Processing

(Part II of *Cambridge Handbook of WM and Language*; Schwieter & Wen, 2021, CUP)

### William O’Grady (2005)

- Emergentist Account
- Three factors in FLA
  1. UG (Chomsky’s priority)
  2. Experience (Usage-based)
  3. General-domain principles (Processing cost as constrained by **WM limits** is primary in syntactic carpentry)

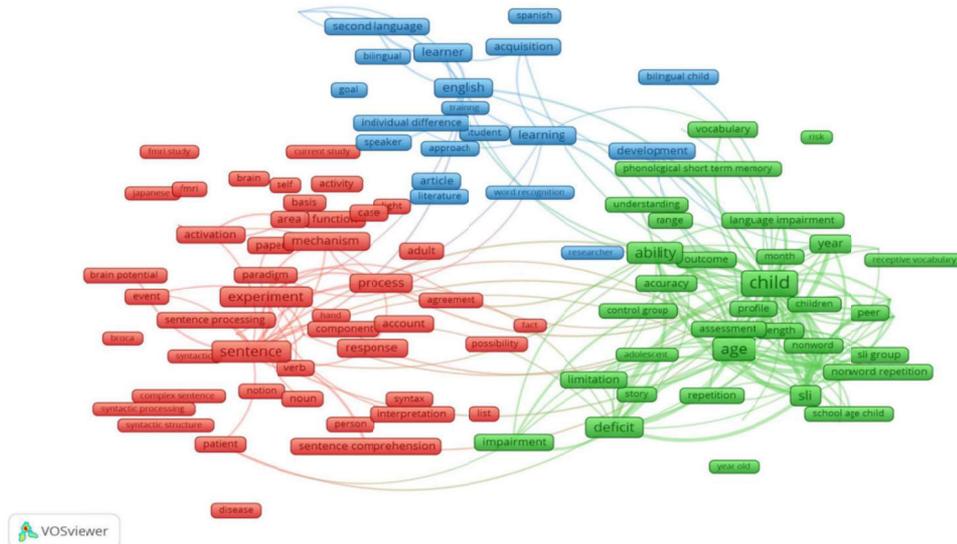
→ WM as the ‘Third Factor’?

### (2012, 2017, 2021)

For example, O’Grady (2017) in his recent commentary on the target article published by Pierce et al. (2017 in *Applied Psycholinguistics*), has cited examples from English, Russian and **Korean** to argue that **WM limitations** not only constrain **phonology** in language (as already discussed in extensive details by Pierce et al. 2017) but also constrain the **character and acquisition of many grammatical phenomena, such as the typology of word order and the interpretation of pronouns** during language processing.

## The WM-Language Nexus:

Working memory in first and second language: Integrating acquisition, processing, development, and intervention (Wen & Bunting, in prep., OUP)



## Working Memory in First Language (L1)

(British vs. North American Paradigms in **Psychology**)

### The British Camp

- Baddeley, Gathercole...
- Focus: phonological loop and vocab (grammar)
- Claim: PL as a 'language learning device' (Baddeley et al., 1998; Papagno, 2021)

### North American Camp

- Daneman & Carpenter, Just vs. Waters & Caplan...
- Focus: IDs in the central executive and language processing (reading comprehension)
- Claim: CE relates to many 'post-interpretive' processes (RC, ambiguity, pronoun...)

# Working Memory in First Language (L1)

(based on Gathercole & Baddeley, 1993)

Language activities	Phonological loop (PWM)	Central executive (EWM)
Reading familiar words	No involvement, except when complex judgements about the phonological structure are required	Not involved (as of 1993)
Vocabulary acquisition	Critical for long-term learning of the phonological form of new words	Involved in allocating attention to interpret the semantic characteristics of new words?
Syntax/grammar acquisition	Can predict native grammatical ability (including that of artificial grammar)	Not clear (as of 1993)
Learning to read	Contributes to the development of a phonological recoding strategy	Not clear (as of 1993)
Language comprehension	Used to maintain a phonological record that can be consulted during offline language processing	Involved in processing syntactic and semantic information and storing the resultant products for subsequent processing
Speech production	None (as of 1993)	Involved in planning the conceptual content of speech?

# Working Memory in First Language (L1)

(based on Wen, 2016)

L1 Domains and activities	WM components/functions			
	PWM	VS-STM	Verbal WM (rehearsal)	EWM
Vocabulary	Yes		Yes	
Morpho-syntax/grammar	Yes?		Yes?	
Listening				Yes
Reading		Yes	Yes	Yes
Speaking			Yes	Yes
Writing		Yes		Yes

# Working Memory and L2 Learning

(Wen, 2012, 2016)

## **General Theoretical Assumptions:**

- L1 learning is UG-based, while SLA depends more on general learning mechanisms like WM, so **WM may play a more important role** in SLA than in L1 learning (Harrington, 1992).
- L1 learning is usually **automatic**, while **SLA is characterized by controlled processing** which requires more cognitive resources, thus relying more on WM (McLaughlin, 1995)
- WM penetrates all **SLA stages** and WM components correspond with **SLA cognitive processes** (noticing, etc. ) (Skehan, 1998 & 2002; Wen & Skehan, forthcoming in ARAL 2021)
- At least in highly skilled L2 users, **L2 processing may draw from the same WM resources** as L1 processing (Miyake & Friedman, 1998).
- Language learning is in essence acquiring “sequences” or “chunks”, WM being instrumental in the **chunking process** of L2 sequences (vocab., formulae, grammar) (N. Ellis, 1996; Martin & Ellis, 2012)

## Working Memory and L2 Acquisitional Domains: Converging Evidence

L2 domains and activities	PWM	EWM	Examples of WM–SLA studies
<b>Lexis or vocabulary</b>	Critical for long-term learning of phonological forms of new words	Involved in interpreting the semantic characteristics of new words?	Service (1992); Cheung (1996); Martin & Ellis (2012); French (2006); Skrzypek (2010); Verhagen & Leseman (2016)
<b>Formulae or collocations</b>	Subserves the chunking process	Not yet clear	Bolibaugh & Foster (2013); Foster et al. (2014); Skrzypek (2009); Skrzypek (2010); Skrzypek & Singleton (2013, 2014)
<b>Morpho-syntax/grammar</b>	Instrumental for chunking of linguistic sequences	Not yet clear	Ellis (1996); Ellis & Sinclair (1996); French & O'Brien (2008); Williams & Lovatt (2005); Wright (2009); Martin & Ellis (2012); Wright (2009); Vulchanova et al. (2014); <b>Tagarrelli et al. (2015)</b> ; Verhagen & Lesman (2016)

## Working Memory and L2 Processes and Skills: Converging Evidence

L2 domains and activities	PWM	EWM	Examples of WM-SLA studies
Reading	Used to maintain phonological records that can be consulted during offline language processing	Involved in processing syntactic and semantic information and storing products for processing	Harrington & Sawyer (1992); Berquist (1997); Miyake & Friedman (1998); Walter (2004); Andersson (2010); Alptekin & Erçetin (2010, 2014)
Interaction and conversation	Involved in maintaining and holding recasts	Involved in noticing feedback or recasts	Li (2013); Mackey et al. (2002, 2010); Mackey & Sachs (2012); Révész (2012); Sagarra (2007); Trovimovich et al. (2007); Zhao (2013); Kim et al. (2015)
Speech production and performance	Promotes narrative ability at early stages	Differential effects on various areas of L2 speech performance (e.g. fluency, accuracy and complexity)	O'Brien et al. (2006, 2007); Payne & Whitney (2002); Fortkamp (1999, 2003); Guará-Tavares (2008); Gass & Lee (2011); Kormos & Trebits (2011); Ahmadian (2012, 2015)
Written production and performance	Involved in translating ideas and reading process	Involved in planning, translating, programming, reading and editing	Abu-Rabia (2003); Adams & Guillot (2008); Bergsleithner (2010); Johnson et al. (2012); Skrzypek (2014); Lu (2015)
Translation/interpreting	Not usually involved	Involved in comprehension (of the source text) and production (of the target text)	Darò & Fabbro (1994); Mizuno (2005); Timarova (2008); Dong & Lin (2013); Dong & Wang (2013); Dong & Cai (2015); Cai et al. (2015); Dong et al.

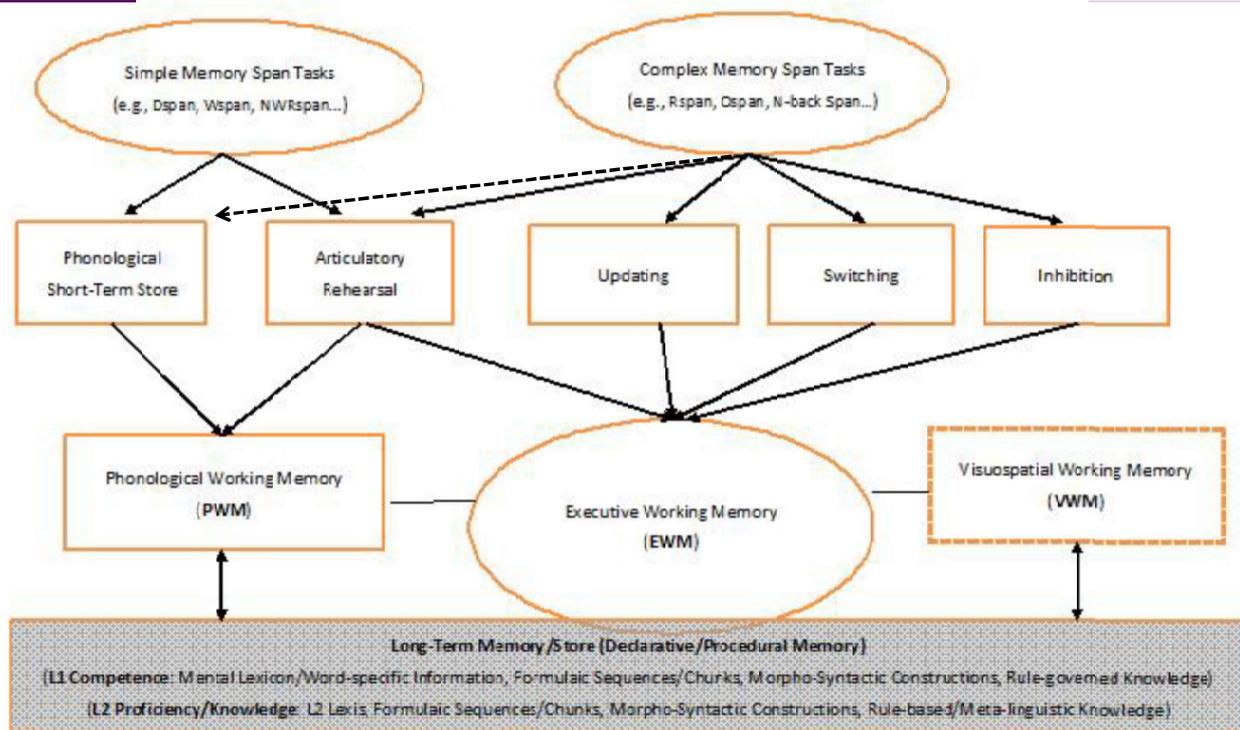
## Caveats with Current WM-SLA Studies

(Wen, 2016; Wen, Juffs & Winke, 2021)

- **Haphazard & Confusing Use of the Term “WM” (PSTM or EWM).**
  - A Taxonomy of WM is needed: PSTM/PWM; EWM; VWM
- **Inconsistent WM Measures/Scoring Procedures (NWRspan, Rspan, or Ospan).**
  - Confounding domain-general vs. domain specificity
  - Challenges for meta-analysis (Linck et al., 2014; Watanabe & Bergsleithner, 2006).
- **Methodological Issues in research methodology (A composite WM score?)**
  - e.g. “*a composite WM score*” Mackey et al., 2002; Winke, 2005; Sagarra, 2007 etc.
  - Beware it may confound PWM & EWM
- **Differential Effects of WM was not an issue (only main effects?).**
  - e.g. Mismatched WM tasks with SLA cognitive processes (RST for L2 Speech)?
  - *The absence of (no) main effects does not mean it is the end of the story!*
  - *Main effects, Interaction effects, Threshold effects (e.g., Sunderman & Kroll, 2009)*
- **Interactions with long-term memory/L2 proficiency was (not) an issue?**

## Conceptualizing & Measuring WM for SLA: Towards an Integrated Perspective

LTM (L1 & L2) => WM components => WM functions => WM Tests => SLA  
(Wen, 2016/2018, Fig. 6.1)



## Measuring WM in SLA: Current Practice

General Principles (Wen, 2012a, 2014, 2015, 2016)

• **PSTM** → 'Simple Memory Span Tasks' (Nonword Repetition Span Task...)  
(Phonological Short-term Store & Rehearsal)

→ *Some examples of nonwords (Cheung, 1996):*

- Tablar, Acklar
- Comnant, Befy, Vaincot
- Antate, Tammesk, Fornick, Bradder

• **EWM** → 'Complex Memory Span Tasks' (Reading Span, Ospan...)

• (WM manipulation/control/inhibitory/updating)

→ *The operation span task (Engle, 2002)*

- Is  $(8/4) - 1 = 1$ ? Bear
- Is  $(6 \times 2) - 2 = 10$ ? Dad
- Is  $(10 \times 2) - 6 = 12$ ? Beans

# Measuring WM in SLA

Specific Guidelines (Wen, 2012, 2014 & 2016; Wen, Juffs & Winke, 2020)

## Current Practice:

- There are simple-memory span tasks (e.g., NWR) vs. complex-memory span tasks (e.g., Reading Span vs. Operation Span)
  - NWR: L2 Acquisition: Vocabulary, Formula & Grammar
  - RST/OST: L2 Processing: Comprehension-based vs. Production-based (cf. interpreting maybe both)

## Future Research:

- There is a hierarchy of factors influencing WM span task outcome:
    - L2 Age/Proficiency → WM span task (simple vs. complex) → L1 vs. L2  
(cf. Cai & Dong, 2012: information type → modality → language)
  - WM Profile/Scales rather than just one span task (Dehn, 2008).
    - PSTM, EWM, VWM, EB...
  - Executive WM functions (as opposed to WM components)?
    - Running memory span task → updating (Bunting et al 2006)
    - The N-back task → inhibitory control, or updating, or both?
- **From components** → **functions** (Wen, 2021; Wen, Juffs & Winke, 2021)
- **Scoring Procedure** → **"Total Performance"** (cf. "Maximum Set Size") (Miyake, 2001)
- **Open Science and Data-Sharing** (e.g., **IRIS**, Wen et al., 2021)

## Working Memory in SLA Empirical Studies: Converging Evidence from large-scale studies and meta analyses

(Wen, 2012, 2016; Wen & Li, 2019 *Cambridge Handbook of Language Learning*)

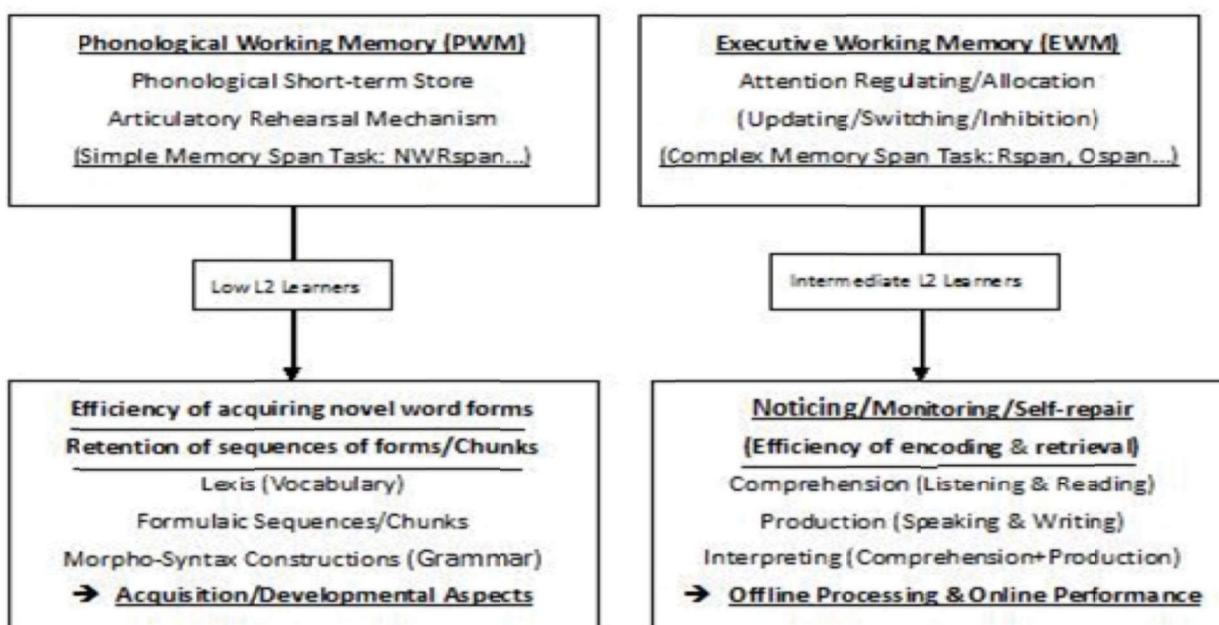
- Highlights of a **large-scale correlation** study at Maryland (HiLab) (Bunting et al., 2013; Bunting & Engle, 2015 'Foreword' to Wen et al. 2015; cf. Doughty, 2018)
    - examined the skills, traits, and abilities that are necessary for adult, post-critical period language learning (N=2200)
    - cognitive abilities (WM, explicit induction..)
    - Non-Cognitive (personality, motivation...)
    - Experiential measures (exposure...)
  - Results of **Meta-Analyses** (Linck et al. 2014; cf. Li, 2017)
    - examined 748 effect sizes from 79 sample studies (1992-2013) involving 3,707 participants
- ☑-- WM is positively associated with both L2 processing and proficiency outcomes, (with an estimated population effect size ( $\rho$ ) of **.255**)
- **WM as the best predictor** of L2 learning outcomes

## Working Memory in L2 Learning results of meta-analyses (Wen & Jackson, forthcoming)

Studies and authors	No. of Empirical Studies (no. of correlation coefficients)	Overall effects	PWM effects	EWM effects
Watanabe and Bergsleithner, 2006	16 (51)	r = 0.18	N/A	N/A
Linck et al., 2014	79	r = 0.255	0.17	0.28
Grundy & Timmer, 2017	27	r = 0.20	N/A	N/A
Li, 2017b	24	r = 0.23	0.22	0.28

### WM in L2 Acquisition, Processing, and Development The Phonological/Executive (P/E) Model (Wen, 2012, 2014, 2015, 2016, 2019)

#### WM Components/Functions & Assessment Procedures



#### Affected SLA Domains and Processes

## Implications: The **Phonological**/Executive Hypothesis

### □ Empirical Predictions:

“PSTM (simple memory span task) underlies the *acquisition* and *developmental aspects* of SLA (esp. complexity aspect of vocabulary (lexis), formulas (phrases) and morpho-syntactic constructions; oral ability at initial stages).”

### □ Emerging Evidence : PWM as LLD (Wen, 2016; cf. Baddeley et al., 1998)

- WM and L1 & L2 **Vocabulary/Lexis** Acquisition and Development
  - In particular, PWM as a ‘language learning device’ in acquiring ‘novel phonological forms’
  - Studies & Reviews: Service, 1992 & 2021; Cheung, 1996...
- WM and L1 & L2 **Formulas** Acquisition and Development (N. Ellis 1996, 2002 & 2012):
  - Language learning is acquisition of sequences/chunks at different levels (incl. words, phrases...)
  - PWM is instrumental in this chunking process (PST store and rehearsal → chunking & consolidate)
  - Studies & Reviews: Skrzypek, 2009; Bolibaug & Foster, 2013; Foster et al., 2014; Bolibaug, 2021
- WM and L1 & L2 **Grammar/Morpho-syntactic Constructions** (Wen & Li, 2019)
  - WM is not related to L1 grammar (Adams & Willis, 2001; cf. N. Ellis, 1996, 2012, 2013: L1 & L2 grammar).
  - WM is involved in L2 grammar (e.g. French & O’Brien, 2008; Hummel, 2009; Kempe et al., 2010; Martin & Ellis, 2012; Engel de Abreu & Gathercole, 2012; Serafini & Sanz, 2016; Sagara, 2017)

## Implications

### The Phonological/**Executive** Hypothesis

### □ Empirical Predictions:

“EWM (as measured by the complex memory span tasks) is mainly implicated in attentional and monitory functions, therefore,

- (1) likely affecting the efficiency of encoding & retrieval aspects of SLA (i.e., the fluency aspects of lexis, formulaic sequences, morpho-syntactic constructions);
- (2) as well as selective offline language processes (e.g., *post-interpretive*) and as well as some real-time performance aspects and outcome measures, thus likely affecting the accuracy aspects in L2 comprehension & production, as well as L2 interaction (e.g., noticing).

### □ Emerging Evidence: EWM as language processor/parser (Wen, 2016 & 2019)

- EWM and L2 **comprehension** and skills processing (e.g., Walter, 2004)
- EWM and L2 **production and performance** (e.g., Ahmadian, 2012; Bergsleithner, 2010)
- EWM and **noticing** of L2 interactions such as corrective feedbacks/recasts (e.g., Mackey et al., 2002; Revez, 2012; Goo, 2012)
- EWM and **interpreting** (= Comprehension + Production?) (e.g., Cai & Dong, 2015; Liu, 2018; Dong et al., 2020’s meta-analysis)

## Implications (More Specific)

### WM in L2 Task Performance

- Cognitive constructs underlying L2 task-based performance (Ellis, 2005)
  - attention/noticing (Schmidt, 2001 cf. Mackey et al., 2002)
  - Focus on Form (FonF) (cf. Doughty, 2001)
  - Working Memory Capacity (WM) → *but how?*

- *Task-based language teaching (Chapter 5)*

➤ Mike Long: Interaction Hypothesis

vs.

➤ Peter Skehan: Limited Attention Capacity

vs.

➤ Peter Robinson: Cognition Hypothesis

## L2 Task-based Performance Theoretical Models

- **WM and TBLT: Theoretical Models**

➤ Peter Skehan (2014, 2015, 2016, 2021):

Limited Attention Capacity Hypothesis (LACH)

→ Inspired by Levelt's (L1) speaking model: conceptualization, **formulation**, and articulation

→ A central role for **WM** (limited capacity)

→ A **trade-off** among the dimensions of CALF

➤ Peter Robinson (2011 & 2015):

Cognition Hypothesis (CH)

→ Inspired by the multiple resources/attention view, learners can attend to more than one aspect of their speech

→ E.g. **WM** should be more evident in complex tasks than simple tasks (as complex tasks involve resource-directing variables that "divert WM to the input that complex tasks promote")

## L2 Task-based Performance Empirical Results and Findings

- **WM and planning conditions (Ellis et al., 2019)**

- Guara Tavares (2011): WM & pre-task planning

- High WM outperformed low WM for C+F, but not A

- Ahmadian (2012): WM & careful online planning

- EWM related to A+F, but not C

- Li & Fu (2018): WM in both pre-task & unpressured within task

- within-task: A+F; not for pre-task

## L2 Task-based Performance Empirical Results and Findings

- **WM and task feature/complexity (Ellis et al., 2019)**

- Kormos & Trebits (2011): WM and task structure

- WM only related to structured task

- Crespo (2011): WM and task complexity (+/- reasoning)

- WM: PWM, attention control, global WM construct

- Neither WM nor attention control was significant

- Only PWM was correlated with outcome measures for both simple and complex task

- Rejecting Robinson's CH (only complex tasks?)

## L2 Task-based Performance Empirical Results and Findings

- **WM and corrective feedback (Ellis et al., 2019)**

- Mackey et al. (2002): WM → noticing more CF

- Kim et al. (2015): WM → noticing of recasts

- Revesz (2012):

- PWM → gains in accuracy in oral production;

- EWM → gains on the written tests

- Goo (2012): WM → implicit feedback type

Vs.

- Yilmaz (2012): WM → explicit feedback

Li (2013a & 2013b): WM → metalinguistic feedback (positive predictor of effects of explicit feedback of classifiers, but negative predictor for the perfective le).

### Future Directions: WM Effects on L2 Task Performance A Research Agenda

- **L2 task (planning) as potential means for “reducing the WM burden”**

- (Ellis, 2005)

- main effects (predictive studies)

- interaction effects (interactive studies)

- threshold effects (Sunderman & Kroll, 2009): minimum level of WM to allow benefits of planning

- Interaction effects: WM as an ID variable interacting with

- Planning conditions (e.g. planning time; pretask-planning vs online planning)

- Task features/difficulty (e.g. task structure)

- Task difficulty/complexity (Skehan vs Robinson)

- topic familiarity (Leeser, 2007; Bei, 2013)

- noticing of corrective feedback (Mackey, et al. 2002, 2010, 2012)

- learning strategies (Winke, 2005)

- learning conditions (Robinson, 2002)

- collaborating/scaffolding (Swain’s “languaging” etc.)

→ *Steadily (though slowly), we are approaching “working memory as language aptitude”* (Wen, 2007 & 2012, 2016 & 2019; Wen & Skehan, 2011; cf. Li, 2017).

# WM as Language Aptitude: The Ultimate Goal

## A Research Agenda

(Wen, 2005, 2007, 2012b, 2014, 2015, 2016 & 2019; Wen & Skehan, 2011; [ARAL 2021 Themed Issue on Aptitude](#))

### ■ A Research Program:

- Main effects, interaction effects, and threshold effects of WM components (PWM & EWM) and WM functions (updating, switching, inhibition) on L1 & SLA domains.

### • Current Research Foci:

WM as a cognitive individual difference underpinning SLA stages/processes

-- WM and SLA acquisitional & development domains: Lexis, **Formulas**, and Constructions

-- WM and L2 sub-skills: Listening, reading, speaking, writing, and **Interpreting**

-- WM and L2 task performance: **Task planning time**; **task features/structure** etc.

→ *All these interacting variables may serve as potential means for “reducing the WM burden” (echoes with R. Ellis’s 2005 claim)*

### ■ My Ultimate Goal is to provide a Taxonomy of WM for language, bilingualism and human cognition

**Working memory as the ultimate “Language Acquisition Device”** (LAD; cf. Chomsky’s LAD).

→ *PWM as a language learning device (cf. Alan Baddeley et al., 1998)*

→ *EWM as a language processing device/processor (cf. Lu Bingfu, 2013)*

## Chomsky’s LAD Revisited?

### □ Previously, Chomsky (1965, p.3) posits:

- Linguistic theory is concerned primarily with an ideal speaker-listener, in a completely homogeneous speech-community, who knows its language perfectly and is unaffected by such **grammatically irrelevant conditions as memory limitations**, distractions, shifts of attention and interest, and errors (random or characteristic) in applying his knowledge of the language in actual performance.

### □ Currently, more and more evidence is converging that:

- **Memory limitations** are hidden in grammar (Rodrigues-Carlos et al., 2019), influencing the acquisition and character of language from phonology to grammar (O’Grady, 2017), rendering WM as a new candidate of language aptitude (Wen, 2016 & 2019), and part and parcel to language acquisition device (Lu & Wen, 2021).

## Conclusion:

### Theoretical Implications of the P/E model

□ It aims to integrate multiple perspectives from Cognitive Sciences & SLA research (thus achieving synergy effects!)

➤ Putting SLA into a better order (c.f. Ellis, 1996, 2013; VanPatten, 2010):

- Acquisition & Development Aspects: Lexis, Formula, Morpho-Syntax Constructions
- Language Processing & Use Aspects: L2 Comprehension, L2 Production and L2 Interaction, and Interpreting (Comprehension + Production?).

➤ Pushing for a 'Bilingual Turn' to WM-language research in psychology (Dekeyser & Juffs, 2005; Baddeley, Cowan, & Engle in Wen et al, 2014)

- Dynamic L1-L2 scenarios (e.g., Bley-Vroman, 1987)
- Production-based WM span tasks (c.f. Daneman, 1991)
- LTM operationalized as L2 proficiency (Lexicon and grammar)

## Conclusion:

### Theoretical Implications of the P/E model

□ With these WM-SLA juxtapositions in place, they would allow us to form finer-grained theoretical links between WM components/functions and specific SLA domains/activities (IDs and SLA; Skehan's Foreword to Wen, 2016)

□ Thus allowing us to make motivated, specific, novel and testable predictions within the 'WM-SLA Nexus' (cf. Michael Ullman's D/P model, 2001; 2005 & 2012)

# Future: Where to go from here?

## 1. Change of Mindset/Broadening Perspectives:

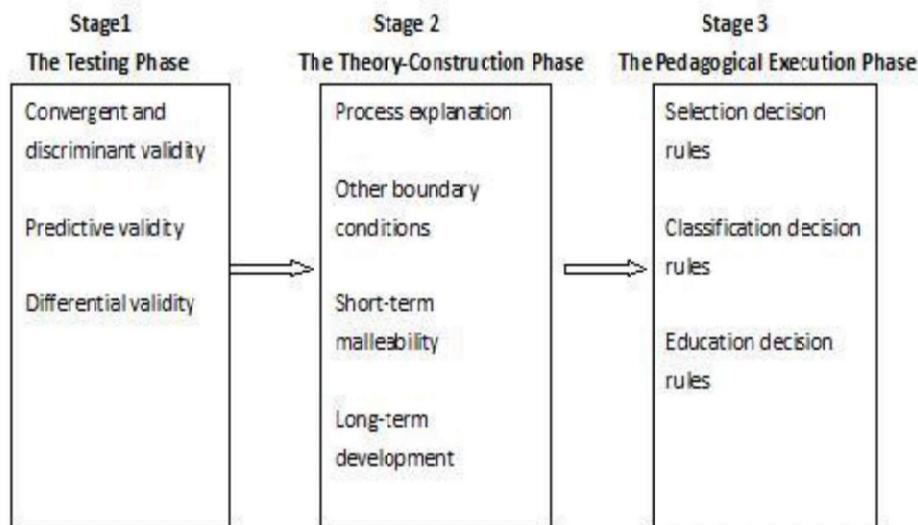
WM as a multi-componential, complex, adaptive, emergent and dynamic cognitive resource system (CDST); and should be measured with ecological validity (Jackson, 2020; Wen & Jackson, forthcoming)

## 2. Working memory as language aptitude: The P/E model (Wen, 2019; Wen & Skehan, 2011)

Testing (predict) → Theory (explain) → Practice (Application)

## 3. Working memory as language acquisition device (Lu & Wen, 2021; Wen, 2019 & in prep.)

Constraining and shaping first and second language acquisition, processing, development & evolution



## References (Journal Papers/Chapters on language aptitude, working memory & SLA)

→ Note: All can be downloaded from my personal websites of Google Scholar, Researchgate, and Academia

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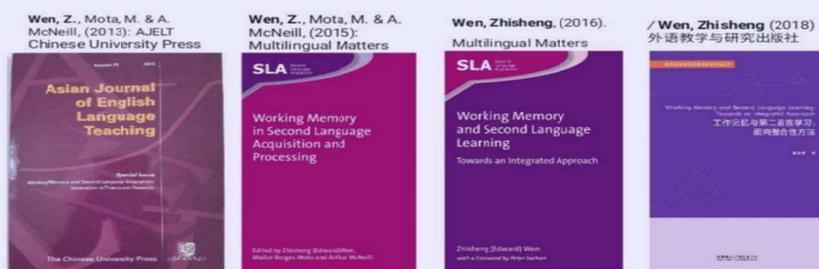
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The End! Thank You! The Story Continues...

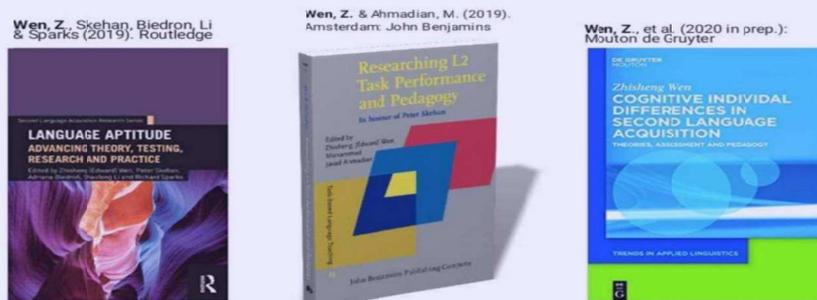
Q & A?

edwardwen@idm.edu.mo

Until 2018!



2019 & 2020



## **Engagement and Motivation in Task-Based Language Teaching: Bringing Research to the Classroom**

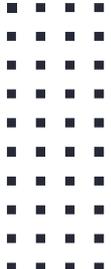
YouJin Kim

(Georgia State University/KAIST)

Over the last three decades, tasks have been perceived as one of the major pedagogical tools in diverse instructional contexts (Ellis, 2017; Kim, 2018; Long, 2016). Task-based language teaching (TBLT) is a teaching approach with a clear theory-practice connection that uses tasks as the basis of pedagogical units. As noted by Ellis (2017) and Long (2016), noticeable theoretical and methodological development has undoubtedly advanced the field of TBLT, often in conjunction with second language acquisition research. In this invited presentation, I will focus on two important, yet less widely examined, constructs: engagement in tasks and task motivation. According to Philip and Duchesne (2016, p. 51), engagement refers to, “a state of heightened attention and involvement, in which participation is reflected not only in the cognitive dimension, but in social, behavioral, and affective dimensions as well.” Dörnyei (2019) recently discussed task motivation in terms of four motivational conglomerates (i.e., interest, productive learner roles, motivational flow, and vision), as well as from an engagement-specific perspective. Accordingly, the constructs of engagement and motivation are closely related in TBLT, yet they have not been discussed widely. The goal of my presentation is to discuss engagement in tasks and task motivation in order to help the audience understand the theoretical underpinnings of these two constructs and their relevant research findings, as well as to guide the audience to think about what we, as language teachers, can do to help our students to be engaged and motivated while performing tasks. My presentation consists of the following four sections: (1) A brief overview of the development of TBLT research; (2) Introduction to the two focal constructs (task engagement and task motivation) and associated research; (3) Future directions of task engagement and motivation research, and (4) Practical suggestions for ways to improve engagement and task motivation in classroom contexts.



**Youjin Kim** specializes in second language acquisition, task-based language teaching and assessment, and classroom-based research. She is the co-author of *Pedagogical Grammar* (2014), and the co-editor of *Task-Based Approaches to Teaching and Assessing Pragmatics* (2018). Her research has particularly focused on the role of interaction during task performance in language development involving two target languages: English and Korean. Dr. Kim is an Associate Editor of *Journal of Second Language Writing*.



**Engagement and Motivation in  
Task-Based Language Teaching:  
Bringing Research to the Classroom**

YouJin Kim



글로벌영어교육학회  
회장 구재명

Special Thanks to Global  
English Teachers Association  
and Dr. Jaemyung Goo



## Goals of the Presentation

Target audience: Both students and novice researchers who are interested in task research and task-based instruction

- Introduce two important, yet less researched constructs: task engagement and task motivation
- Explore the relationship between task engagement and the quality of task outcomes
- Discuss how previous task research can inform how to encourage our students to be engaged with tasks and stay motivated during tasks
- Discuss future directions for task engagement and motivation research



## Agenda

- Part 1: A brief introduction to the fields of instructed SLA and TBLT and their relationships
- Part 2: An introduction to the two focal constructs: Task engagement and task motivation
- Part 3: Practical suggestions for ways to improve engagement and task motivation in classroom contexts
- Part 4: Future directions of task engagement and motivation research

Part 1: A brief introduction to the fields of instructed SLA and TBLT and their relationships

## Interface between Instructed SLA and TBLT

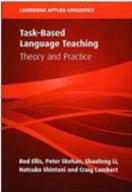


**Instructed Second Language Acquisition (ISLA)**

How learning conditions can be manipulated to facilitate L2 development

(Loewen, 2020)

Evidence-based language learning through task performance



**Task-Based Language Teaching (TBLT)**

Uses tasks as a necessary and sufficient basis for syllabus design

(Bygate, 2015; Long, 2015)

**Chapter 07** Create a Product Review Video on your Webpage  
**Task 4:** Individual Speaking  
**Real World Task**

**Task Scenario**  
You are going to create a product review video about one of the products that you bought. Think about which item you will describe, and include how to use it, the pros and cons of the product, and things to remember when using the item.

**Materials to bring:**

- An actual product that you will introduce (if you cannot bring one, you can bring a picture instead)
- An electronic device for making your product review video (e.g., laptop, iPad)

**Grammar in Action**

- Expressing 'recommendation' -> <math>ㅁㅁㅁ</math>
- Connective (infinitive) -> <math>ㅁㅁㅁ</math>
- Expressing 'other' -> <math>ㅁㅁ</math>
- Using modifying form for adjectives/nouns (infinitive) -> <math>ㅁㅁ</math>

**Helpful questions to elicit the content of your product review:**

- What did you buy?
- When and why did you buy the item?
- How were you able to use the item and how did it perform?
- What do you have to do after using the item?
- What are the pros and cons of the item?
- To whom would you recommend the item?

**Task 3 (Pre-writing)** Recall the tasks in this chapter and plan how to write your product review. Don't forget to bring in materials in advance before performing the task. Think about how you are going to organize your product review. Try to use the new grammar features of Chapter 7 when you plan your product review.

**Task 3 (Presenting)** Make your product review video using the information above.

**Language Programs**  
Student A (Name: \_\_\_\_\_)

Scenario: You and your partner are planning to attend an Intensive English Program. You and your partner have chosen two potential locations. Discuss the characteristics of each program and decide which program you want to attend during summer.

**American English Institute**  
Getting started in Chicago

**About Chicago:**

- Chicago is one of America's major metropolitan areas which is located on the shores of Lake Michigan.

**Characteristics:**

- Free 24-hour internet access
- New Chicago's beautiful architecture and wonderful business district
- Plentiful public transportation available to visit attractions in the city
- Spacious on-campus housing is available
- Offers a variety of recreational activities from approximately 10 different countries
- Interactivity with American families

**Activities:**

- Explore the city party to yourself with your friends

**Things to remember:**

- Alcohol is prohibited on campus
- Free airport pick up

Cost: \$ 3,000 for 10 weeks

**Seaview Study Center**  
Study in the sun!

**About Miami:** The City of Miami is surrounded by distinguished scenic sites.

**Description:**

- Enjoy fun and learning English at the Seaview Study Center, Miami
- English lessons are for two hours every morning, Monday to Friday
- Affordable tuition for full-time enrollment per semester
- Stay in family-size rooms at the Seaview Holiday Park
- Explore the amazing endless world at Miami Sea Life Park

**Activities:**

- Surfing lessons with flexible schedules virtually every weekend

**Things to remember:**

- Free pick up and baggage service from the airport
- Handily surfing lessons will be available at hot weather

Cost: \$9,200 for four weeks

Kim, Choi, Yun, Kim, & Kang (in press)  
*Learning Korean through Tasks*

Kim, Jung, & Tracy-Ventura (2017)

# Part 2: An introduction to the two focal constructs: Task engagement and task motivation

- 46 -

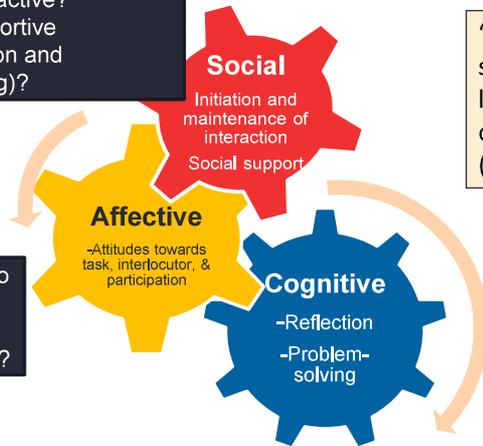
## Task Engagement

## Engagement

- “a state of heightened attention and involvement, in which participation is reflected not only in the cognitive dimension, but in social, behavioral, and affective dimensions as well” (Philp & Duchesne, 2016, p. 51)
- A multifaceted construct that characterizes several characteristics (i.e., cognitive, behavior, emotional, and social)
- Interdependence of the characteristics

## Engagement with Language (Svalberg, 2009)

- How interactive?
- How supportive (negotiation and scaffolding)?



“Cognitive, and/or affective, and/or social state and a process in which the learner is the agent and language is the object (and sometimes vehicle)” (Svalberg, 2009, p. 247)

- Is student eager to participate?
- How purposeful?
- How autonomous?

- Does student seem to notice/reflect language/interaction features (alertness)?

## Attention to Language During Task Performance

- Language Related Episodes (LREs) - any segments of conversation in which language learners “talk about the language they are producing, question their language use, or correct themselves or others” (Swain & Lapkin, 1998, p. 326).

Example 3: Grammatical LRE (task performance)

- 1 Learner 1: Is she wearing a shoes?
- 2 Learner 2: 아닌데, a 가 들어가면 안돼.  
(No, you should not use “a.”)

Kim, 2013, p. 20

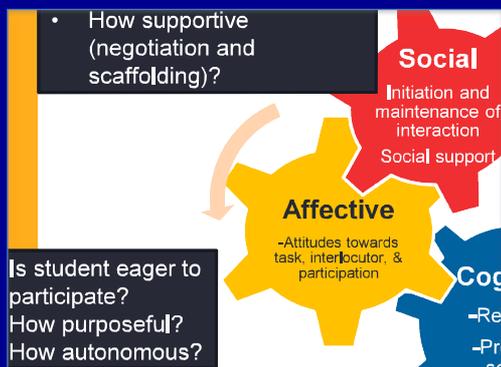
- Pragmatic-related episodes (PREs) - Sociopragmatics and pragmalinguistics (Taguchi & Kim, 2016)

Example 4: Incorrectly resolved PRE in the individual group

Learner 1: 자율학습 시간에 가지러 집에 가도 되냐 물어봐요 (I need to ask whether I can go home to bring the assignment during self-study session) uh, may, uh, big request, is there any way that I could uh 그럼 (then)? Is there any way that I could possible homework my homework? Can I can I go to my house to get my homework? And can I go to my house to get my homework? 맞나? (Is this right?)

Taguchi & Kim, 2016, p. 431

## Engagement with Language (Svalberg, 2009)



“Cognitive, and/or affective, and/or social state and a process in which the learner is the agent and language is the object (and sometimes vehicle)”

LREs miss this!

- Does student seem to notice/reflect language/interaction features (alertness)?

## Baralt, Gurzynski-Weiss, & Kim (2016)

CHAPTER 8

**Engagement with the language**  
How examining learners' affective and social engagement explains successful learner-generated attention to form

### Context

- Spanish as a foreign language class at a university (Spanish II)
- Both classes (face-to-face and on-line) met three times a week.

### Participants

- 40 learners (18 males, 22 females)
- All monolingual native speakers except one
- 20 face-to-face class and 20 online class



vs.



### Task

- Dialogic story retelling
- Read story sections in L1 and used comic card strips to facilitate retelling
- Targeted linguistic item: Spanish past subjunctive
- Completed task with peer during face-to-face interactions or synchronous computer-mediated communication (SCMC)

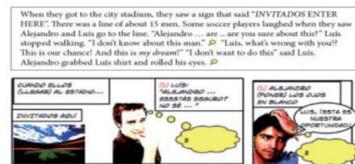


Figure 2. Cognitively complex task: Example of L1 story section with accompanying comic.

### Survey

- Focusing on each engagement dimension  
E.g., learners' views on peer interaction in class, perceptions/attitudes about task, how they took to task, perceived goal of task

## Baralt, Gurzynski-Weiss, & Kim (2016): Results summary

### Cognitive engagement

- FTF: reflection on targeted form
- SCMC: no reflection on targeted form

### Affective engagement

- FTF: positive, fun, willing to engage, purposeful, enjoyable
- SCMC: negative, bored, anxious, tense

### Social engagement

- FTF: presence of encouragement, support, praise; friendship key factor
- SCMC: no observable socialization or establishment of relationship; autonomy

## Baralt, Gurzynski-Weiss & Kim (2016): Results summary

### Cognitive engagement

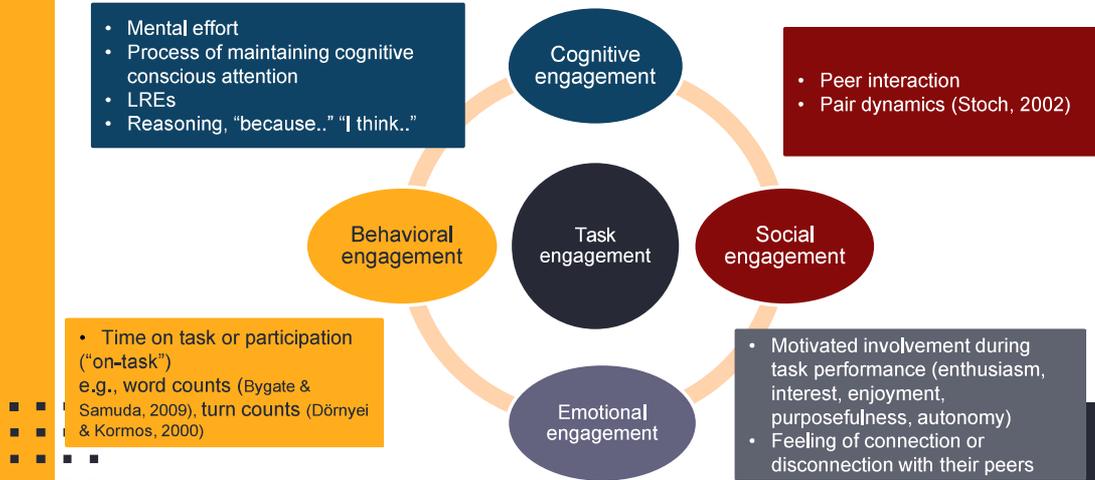
“To be honest I hated this task. I didn't really know the person I was chatting with, and I don't think he really cared about working with me. He just wanted to get the task done and didn't really talk to me at all. It was weird, we didn't even really take turns. I tried but he just kept going so finally I just let him retell the story and mentally checked out.”  
(SCMC, survey)

### Affective engagement

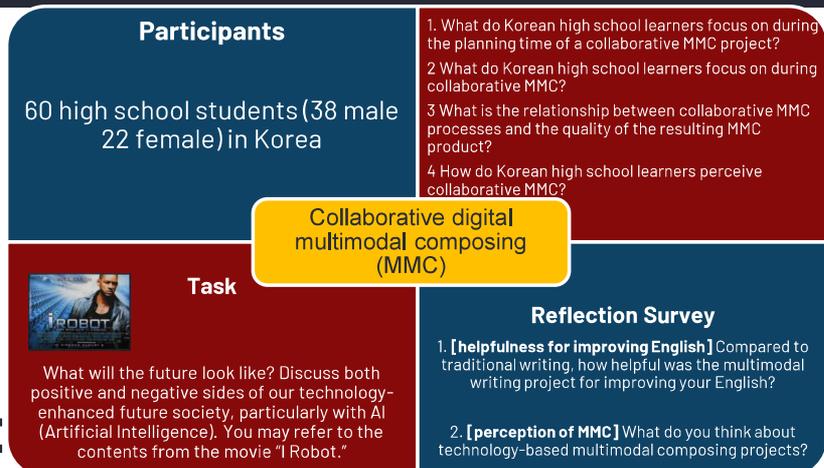
### Social engagement

- FTF: presence of encouragement, support, praise; friendship key factor
- SCMC: no observable socialization or establishment of relationship; autonomy

## Exploring Engagement in Tasks in the Language Classroom (Philp & Duchesne, 2016)

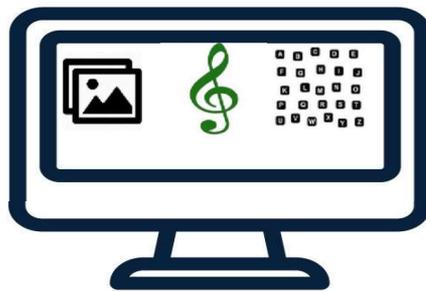


## Sample study 1: Kim & Kang (2020)



## Digital Multimodal Composing (MMC) Tasks

“activities that engage learners in the use of digital tools to construct texts in multiple semiotic modes, including writing, image, and sound” (Hafner, 2015, p. 487)



## Sample Digital Multimodal Composing (MMC) Task



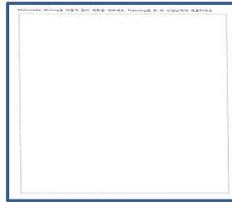
*in 2020, thousands of robots are expected to be used  
and people's life become more convenient.*

# Procedure (Kim & Kang, 2020)

Days 1-3  
Watch "I Robot" (3 sessions)



Day 4:  
Unstructured Planning



Days 5-6:  
Computer Labs (2 sessions)



Day 7:  
Sharing Multimodal Composing



Day 8:  
Reflection Survey (5 min)



Day 9 (1 month later):  
Traditional Writing (30 min)

중국어 사용이 증가하는 것은 미래 도시를 더 편리하게 만들 것인가? (Technology use is increasing. Is it better for the future city?)

I disagree with opinion that technology makes a better world. As example, although the computer was invented, we don't say that we work less. Also, though working machine was invented, we don't say that class is shorter. Even if technology develops, eventually work time isn't diminish. Rather increase, almost people of modern city do overtime. 'Always turn-on building' becomes a new land mark of metropolis, as noticeable building of Seoul. And an end of criminal appear.

## Analysis - Multimodal Composing Task Quality (Kim & Kang, 2020)

Appendix A. Holistic Rubric

	Excellent	Good	Developing	Inadequate	Poor
Scores	5	4	3	2	1
	<ul style="list-style-type: none"> <li>-Effectively includes all required parts to complete the task (summary, arguments (positive and negative sides), and stance statements)</li> <li>-Various modes are used effectively for meaning-making</li> <li>-Organizes each point clearly</li> </ul>	<ul style="list-style-type: none"> <li>-Includes almost all required parts to complete the task with some details (summary, arguments (positive and negative sides), and stance statements)</li> <li>-Makes adequate use of modes for meaning-making</li> <li>-Often organizes points clearly but lacks proper transitions</li> </ul>	<ul style="list-style-type: none"> <li>-Clearly lacks one of the required parts to complete the task and does not include enough details in: summary, arguments (positive and negative sides), and stance statements</li> <li>-Sometimes use of modes for meaning making is ineffective</li> <li>-Sometimes hard to follow organization</li> </ul>	<ul style="list-style-type: none"> <li>-Lacks more than two of the required parts to complete the task (summary, arguments (positive and negative sides), and stance statements) and lacks details</li> <li>-Makes inadequate or limited use of modes for meaning making</li> <li>-Often hard to follow organization</li> </ul>	<ul style="list-style-type: none"> <li>-Almost all of the required parts to complete the task are incomplete</li> <li>-Makes little effort to use digital modes</li> <li>-Hard to follow organization</li> </ul>

Adapted from Burnett, Frazee, Hanggi, and Madden (2014)

Interrater reliability = 95% (exact agreement percentage)

## MMC Episodes Analysis: Cognitive and Behavioral Engagement during Collaborative MMC (Kim & Kang, 2020)

- **Task management**
- **Content**
  - Storyline
  - Image/icon
  - Audio
  - Video
- **Information search**
- **Slide design/organization**
- **Inquiries about digital tools**
  - Adobe Spark
  - Music
  - Pictures/icons
  - Videos
- **Digital tools**
  - Image/icon modification
  - Video modification
  - Audio modification
  - Text modification (visual effect)
- **Language use**
  - Lexical
  - Grammar (translation)
  - Mechanics
- **Revision**
- **Reflection**
- **Technical problems**

Adapted from Smith et al. (2017)

Interrater reliability = 92% (exact agreement percentage)

## Interaction – Slide Design/Organization (Kim & Kang, 2020)

A: How about writing two advantages on one slide and two disadvantages on another slide?

B: I think we can write one thing for one slide each.

A: One thing for each slide?

B: Yeah, the sample video was like that.

A: Okay.



Translated from Korean

Table 2  
Average Number of MMC Episodes and the Number of Turns per MMC Episode during Planning and MMC Sessions by Topic.

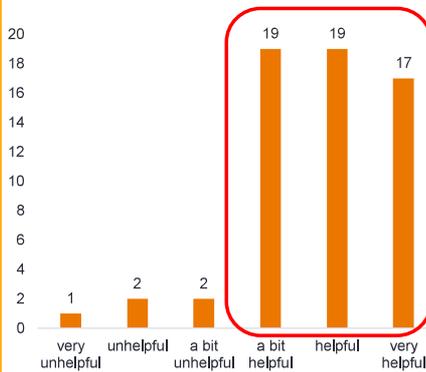
MMC episode	Number of MMC episodes						Number of turns per MMC episode		
	Planning		MMC		Total		M	SD	
	M	SD	M	SD	M	SD			
Task management	5.72	3.13	14.31	7.19	20.03	9.26	3.74	1.05	
	Storyline	7.45	3.38	11.86	9.09	19.31	9.57	5.94	1.91
	Image/icon	1.93	1.83	12.66	7.29	14.59	7.83	4.42	1.34
Content	Audio	.62	1.05	5.00	3.49	5.62	3.90	6.36	4.49
	Video	.35	.86	1.59	2.04	1.93	2.56	5.84	4.13
	Total	10.34	4.09	31.10	12.02	41.45	14.71		
Information search		.90	1.11	3.03	3.05	3.93	3.32	4.45	1.88
Slide design/organization		2.59	2.82	15.28	8.41	17.86	8.87	4.60	1.59
	Adobe Spark	.24	1.29	2.21	2.30	2.45	2.43	3.91	3.75
	Audio	.03	.19	2.00	2.20	2.03	2.19	6.50	3.79
Inquiries related to digital tools	Image/icons	.07	.26	1.10	1.35	1.17	1.44	5.97	4.67
	Video	.03	.19	.41	1.19	.45	1.12	7.06	5.63
	Total	.38	1.35	5.72	4.96	6.10	4.79		
	Image/icon	.07	.26	5.76	5.30	5.83	5.39	5.55	3.03
	Video	.00	.00	.38	.86	.38	.86	2.04	1.75
Digital modification	Audio	.03	.19	1.38	1.54	1.41	1.55	7.14	5.57
	Text	.00	.00	1.17	1.39	1.17	1.39	3.61	2.48
	Total	.10	.31	8.69	5.64	8.79	5.74		
	Lexical	.45	.63	8.24	5.26	8.69	5.39	4.55	1.94
Language use	Grammar	.76	1.43	14.86	9.37	15.62	9.75	4.63	2.07
	Mechanics	.07	.26	2.00	2.02	2.07	2.10	4.32	3.29
	Total	1.28	1.87	25.10	13.37	26.38	14.08		
Revision		.00	.00	1.17	1.56	1.17	1.56	3.79	2.99
Reflection		.00	.00	1.38	1.42	1.38	1.42	2.15	1.49
Technical problems		.00	.00	1.10	1.46	1.10	1.46	7.63	5.80

Table 3  
Correlation Table for MMC Scores and MMC Episodes.

	MMC scores	Task management	Content	Information search	Slide design/organization	Inquiries related to digital tools	Digital modification	Language use	Revision	Reflection	Technical problem
MMC scores	1	-.14	.06	-.35	-.08	-.25	-.18	.01	-.33	-.10	.15
Task management			.19	.12	.36	.35	.17	.15	.23	.26	.20
Content				.16	.50*	.15	.43*	.46*	.24	-.21	-.19
Information search					.14	.31	.11	.39*	.18	-.06	-.30
Slide design/organization						.17	.31	.51*	.59*	.27	.02
Inquiries related to digital tools							.22	.15	.22	.17	-.11
Digital modification								.21	.20	-.06	-.32
Language use									.48*	.25	-.19
Revision										.56*	-.12
Reflection											.23
Technical problems											

\* Correlation is significant at the 0.05 level.

## Helpfulness for Improving English Skills (Kim & Kang, 2020)



Mean = 4.71, SD = 1.11

### 1. Opportunity to use English autonomously (28)

- I had a chance to write in English on my own.

### 2. Interesting (16)

- It was not boring; I could express my opinion better; I think the teaching methodology is cutting-edge.

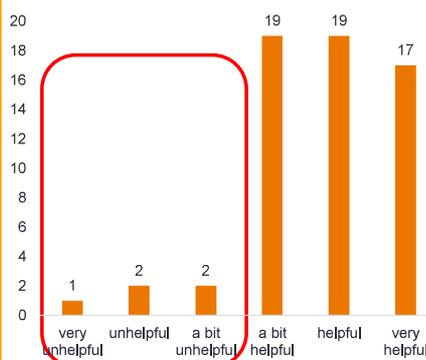
### 3. Learning new information (7)

- It was helpful because I could use different ways to find information.

### 4. Building confidence (3)

- I felt like I was being thrown in the sea although I do not know how to swim. But I could find a way to write in English as I was trying to work with the task.

## Helpfulness for Improving English Skills (Kim & Kang, 2020)



Mean = 4.71, SD = 1.11

### 1. Not that different (2)

- I felt it was not that different from the traditional writing.

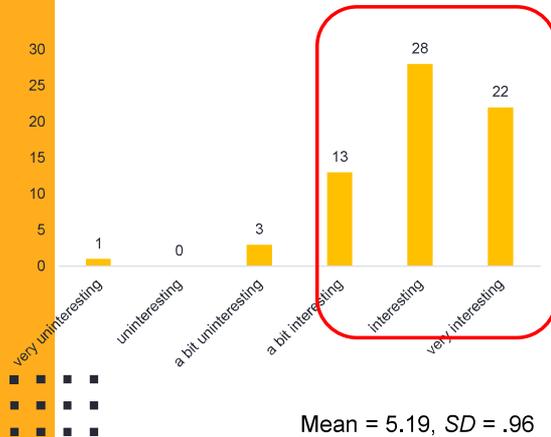
### 2. My partner did the majority of writing (2)

- My partner did the majority of writing, and I dealt with technological tools.

### 3. Few opportunities with writing (1)

- I did not have many opportunities with writing.

## Perceptions of Multimodal Writing Project (Kim & Kang, 2020)



### 1. Use of technology (25)

-I liked when I could see my writing in the form of video when it was completed. I was very motivated and we used technology in class.

### 2. Something new (17)

-It was totally new. I have never had this kind of class before. I hope I can do more of this type of class.

### 3. Based on an interesting movie (3)

-I was not interested in robots but I liked we used an interesting movie for the class in an innovative way.

## Sample Study 1: Kim & Kang (2020)- Task Engagement Perspectives

- Cognitive and behavioral engagement: No significant relationship between cognitive and behavioral engagement and the quality of collaborative MMC Task
  - Timed-unfamiliar collaborative task
  - The quality of engagement (qualitative analysis)
- Emotional engagement: In general, Korean high school students showed positive emotional engagement with the collaborative MMC task.
  - Feeling accomplished
  - Satisfaction with using English
  - Novelty effects

## Sample Study 2: Kim, Kang, Nam, & Skalicky (under review)

### Participants

-116 Korean 2<sup>nd</sup> grade high school students (60 unguided, 56 guided)  
 -Age:  $M = 16.90$ ,  $SD = .31$   
 -66 male and 50 female students  
 -Weekly English instruction: 4 hours per week (mandatory)

1. Is the number of MMC episodes during a prewriting session influenced by whether pretask planning was guided or unguided? If so, to what extent did the guided and unguided conditions show differences in the frequency of MMC episodes for different aspects of MMC planning?

2. Is the number of different topics of interaction during multimodal composing influenced by whether pretask planning was guided or unguided? If so, to what extent did the guided and unguided conditions show differences in the frequency of MMC episodes for different aspects of MMC task performance procedure?

3. Is the quality of students' multimodal composing influenced by English writing proficiency, pretask planning condition (guided vs. unguided), or the frequency of MMC episodes during planning time and task performance?



### Task

What will the future look like? Discuss both positive and negative sides of our technology-enhanced future society, particularly with AI (Artificial Intelligence). You may refer to the contents from the movie "I Robot."

### Planning Condition

### Reflection Survey

1. **[helpfulness for improving English]** Compared to traditional writing, how helpful was the multimodal writing project for improving your English?

2. **[perception of MMC]** What do you think about technology-based multimodal composing projects?

## Procedure

**Days 1-3**  
Watch "I Robot" (3 sessions)

**Day 4: Planning**

Group A: Guided Planning		Group B: Unguided planning	
Considering how you would use different multimodal tools, plan how you will create multimodal composing.		Plan how you will create your multimodal composition.	
Thesis statement			
Slide 1:	Text		
photos/pictures/music			
Slide 2:	Text		
photos/pictures/music			

**Days 5-6:**  
Computer Labs (2 sessions)

**Day 7:**  
Sharing Multimodal Composing

Later, Dr. Susan Kalvin helped Del probe and he surveyed a robot, Sunny.

**Day 8:**  
Reflection Survey (5 min)

**Day 9 (1 month later):**  
Traditional Writing (30 min)

I disagree with opinion that Technology makes a better world. As example, although the computer has invented, we don't say that we work less. Also, though working machine was invented, we don't say that chore is double. Even if technology develops, mankind's work time isn't diminish. Rather increase, almost people of modern city do overtime. 'Always turn-on building' becomes a new landmark of metropolis, as reasonable building of Seoul. And, you kind of criminal appear.

DMC episode topic	Sub-categories	Guided (n = 27)		Unguided (n = 29)	
		M	SD	M	SD
Task management		8.39 (29%)	5.06	5.72 (27%)	3.13
Content	Storyline	10.11	6.22	7.45	3.38
	Image/icon	2.48	4.35	1.93	1.83
	Audio	0.67	1.64	0.62	1.05
	Video	0.33	0.68	0.35	0.86
	Total	13.59 (46%)	8.88	10.34 (49%)	4.09
Information search		1.0 (3%)	1.49	0.90 (4%)	1.11
Slide design/ organization		3.26 (11%)	2.55	2.59 (12%)	2.82
Inquiries of digital tools	Adobe sparks	0.29	0.87	0.24	1.29
	Music	0.00	0.00	0.03	0.19
	Pictures/icons	0.07	0.27	0.07	0.26
	Videos	0.15	0.46	0.03	0.19
	Total	0.52 (2%)	1.12	0.38 (2%)	1.35
Modification	Image/icon modification	0.04	0.19	0.07	0.26
	Video modification	0.00	0.00	0.00	0.00
	Audio modification	0.00	0.00	0.03	0.19
	Text modification	0.00	0.00	0.00	0.00
	Total	0.04 (0.1%)	0.19	0.10 (0.4%)	0.31
	Language use	Grammar	1.30	2.61	0.76
	Lexicon	1.04	1.87	0.45	0.63
	Mechanics	0.07	0.27	0.07	0.26
	Total	2.41 (8%)	4.36	1.28 (6%)	1.87
Review		0.00 (0%)	0.00	0.00 (0%)	0.00
Reflection		0.00 (0%)	0.00	0.00 (0%)	0.00
Technical problems		0.04 (0.1%)	0.19	0.00 (0%)	0.00
Overall man		29.44	11.47	21.31	8.90

Cognitive and behavioral engagement with tasks **during pretask planning**

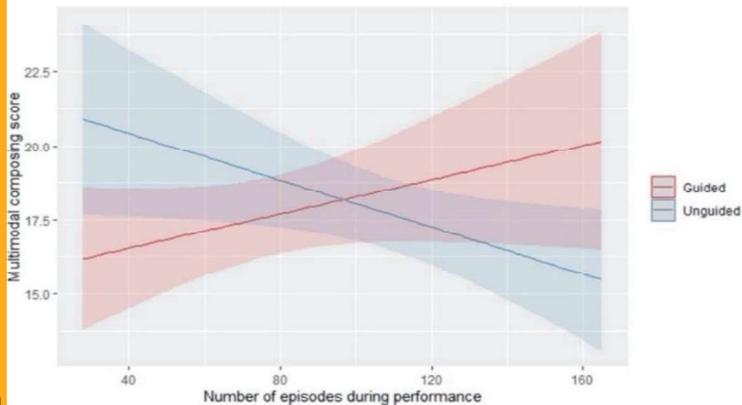
More cognitive and behavioral engagement by the guided planning group when compared to the unguided planning group during planning time ( $t = 2.95$ ,  $p = .005$ ,  $d = .80$ )

DMC episodes topic	Sub-categories	Guided (n=27)		Unguided (n=29)	
		M	SD	M	SD
Task management		16.19 (20%)	5.42	14.31 (13%)	7.19
Content	Storyline	8.04	7.63	11.06	9.09
	Image/icon	10.85	8.68	12.66	7.29
	Audio	2.33	2.86	5.00	3.49
	Video	2.07	2.88	1.59	2.04
	Total	23.30 (29%)	14.17	31.10 (29%)	12.02
Information search		1.00 (1%)	1.69	3.03 (3%)	3.05
Slide design/ organization		12.15 (15%)	7.04	15.28 (14%)	8.41
Inquires of digital tools	Adobe sparks	1.78	2.12	2.21	2.30
	Music	0.74	1.23	2.00	2.20
	Pictures/icons	0.56	1.31	1.10	1.35
	Videos	0.26	1.19	0.41	1.19
	Total	3.63 (4%)	3.22	5.72 (5%)	4.96
Modification	Image/icon modification	4.96	3.90	5.76	5.30
	Video modification	0.96	2.83	0.38	0.86
	Audio modification	0.41	0.93	1.38	1.54
	Text modification	0.70	1.41	1.17	1.39
	Total	7.04 (9%)	5.84	8.69 (8%)	5.64
	Language use	Grammar	9.04	7.93	14.86
	Lexicon	4.44	5.09	8.24	5.26
	Mechanics	2.04	2.81	2.00	2.02
	Total	15.52 (19%)	13.67	25.10 (24%)	13.37
Review		1.22 (2%)	1.69	1.17 (1%)	1.56
Reflection		0.96 (1%)	1.48	1.38 (1%)	1.42
Technical problems		0.59 (0.7%)	1.08	1.10 (1%)	1.46
Overall mean		81.60	33.10	106.86	35.00

Cognitive and behavioral engagement with tasks **during collaborative multimodal task performance**

More cognitive and behavioral engagement by the unguided planning group when compared to the guided planning group during task performance ( $t = -2.78$ ,  $p = .008$ ,  $d = .74$ )

## Results: Pretest Planning Condition, Task Engagement and the DMC scores (Kim, Kang, Nam, & Skalicky, under review)

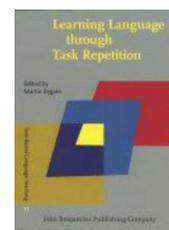


The increased amount of cognitive engagement by the guided planning group predicted higher DMC task scores when compared to the unguided group.

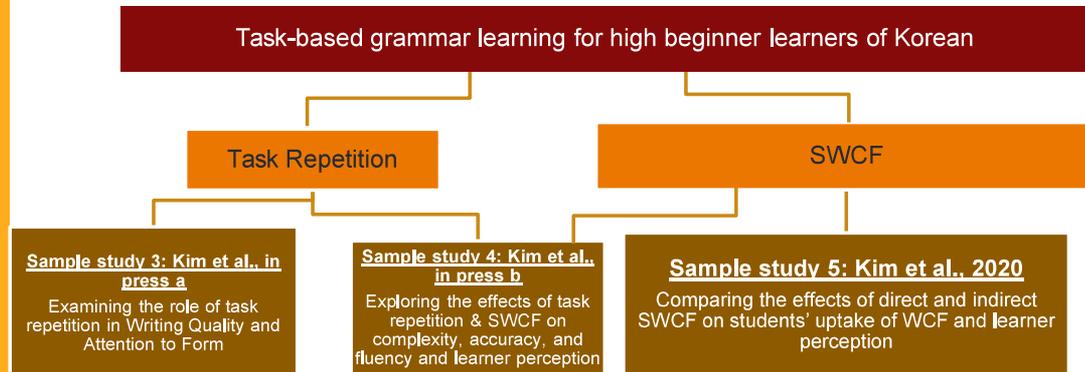
Significant interaction effect between planning condition and the amount of engagement ( $F[7, 48] = 2.419, p = .033, \text{adjusted } R^2 = .153$ )

## Promoting the Four Dimensions of Task Engagement in Low-Level Foreign Language Classrooms

- Task repetition (Bygate, 1999; Kim & Tracy-Ventura, 2013)
  - Procedural repetition (e.g., Kim & Tracy-Ventura, 2013; Lynch & Maclean, 2000; Patanasorn, 2010)
  - Exact task repetition (e.g., Ahmadian and Tavakoli, 2010; Bygate, 2001; Gass et al., 1999)
  - Content repetition (e.g., Patanasorn, 2010)
- Synchronous written corrective feedback (SWCF; Kim et al., 2020, in press)
  - Providing SWCF while students are performing tasks
    - Direct SWCF
    - Indirect SWCF



## Task Repetition, SWCF, and Task Engagement



## Research Contexts (Kim et al., 2020, in press a, in press b)

- KRN 102 (the second half of the first-year elementary Korean language course) at a university in the USA
- All students had completed KOR 101.
- Majoring in various disciplines, such as business, biology, and applied math

## Sample Collaborative Writing Task (Kim et al., 2020, in press a, in press b)



### ◆ Today's Task

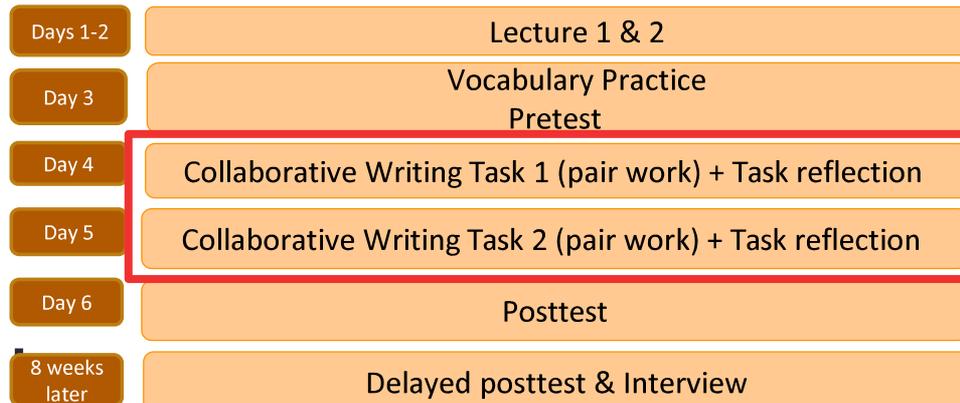
Imagine that you (student A) and your partner (student B) are writing a postcard to 광수, a friend whom you and your partner met when both of you studied abroad in Korea. 광수 is going to travel to the U.S. and plans to come to Atlanta to see you and your partner at Emory this summer. You and your partner are writing a postcard to 광수 to share:

- 1) what you have been doing these days;
- 2) what you wanted to do but couldn't do in Korea;
- 3) what you want to do in Atlanta; and
- 4) traveling advice to 광수.

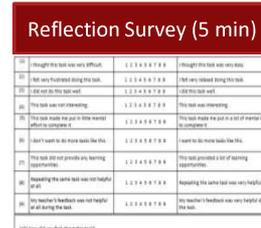
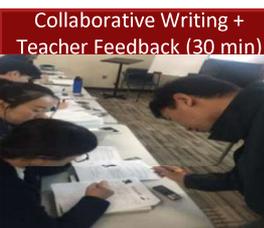
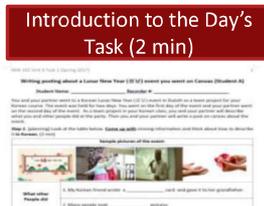
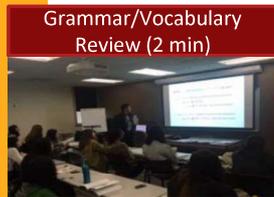
### Sample Input

Traveling advice in Atlanta		
	Reasons: traffic jam; expensive taxi fare	

## Research Design (Kim et al., 2020, in press a, in press b)



## Task Performance Procedure (50 min) (Kim et al., 2020, in press a, in press b)



## Sample SWCF: Direct vs. Indirect (Kim et al., 2020)



- (1) Direct SWCF: Circling errors + provision of correct forms orally
- (2) Indirect SWCF: Circling errors

## Reflection Survey (Emotional and Social Engagement)

Task difficulty

Satisfaction

Enjoyment

Motivation

Learning Opportunity

Effectiveness of Task Repetition

Helpfulness of Feedback

Written Comments

(1)	I thought this task was very difficult.	1 2 3 4 5 6 7 8 9	I thought this task was very easy.
(2)	I felt very frustrated doing this task.	1 2 3 4 5 6 7 8 9	I felt very relaxed doing this task.
(3)	I did not do this task well.	1 2 3 4 5 6 7 8 9	I did this task well.
(4)	This task was not interesting.	1 2 3 4 5 6 7 8 9	This task was interesting.
(5)	This task made me put in little mental effort to complete it.	1 2 3 4 5 6 7 8 9	This task made me put in a lot of mental effort to complete it.
(6)	I don't want to do more tasks like this.	1 2 3 4 5 6 7 8 9	I want to do more tasks like this.
(7)	This task did not provide any learning opportunities.	1 2 3 4 5 6 7 8 9	This task provided a lot of learning opportunities.
(8)	Repeating the same task was not helpful at all.	1 2 3 4 5 6 7 8 9	Repeating the same task was very helpful.
(9)	My teacher's feedback was not helpful at all during the task.	1 2 3 4 5 6 7 8 9	My teacher's feedback was very helpful during the task.
(10) How did you feel about this task?			
(11) How did you feel about your teacher's feedback during your task performance?			

## Task Repetition, SWCF, and Task Engagement

Task-based grammar learning for high beginner learners of Korean

Task Repetition

SWCF

**Sample study 3: Kim et al., in press a**

Examining the role of task repetition in Writing Quality and Attention to Form

**Sample study 4: Kim et al., in press b**

Exploring the effects of task repetition & SWCF on complexity, accuracy, and fluency and learner perception

**Sample study 5: Kim et al., 2020**

Comparing the effects of direct and indirect SWCF on students' uptake of WCF and learner perception

## Task Repetition, SWCF and Task Engagement

### Task-based grammar learning for high beginner learners of Korean

Task Repetition

SWCF

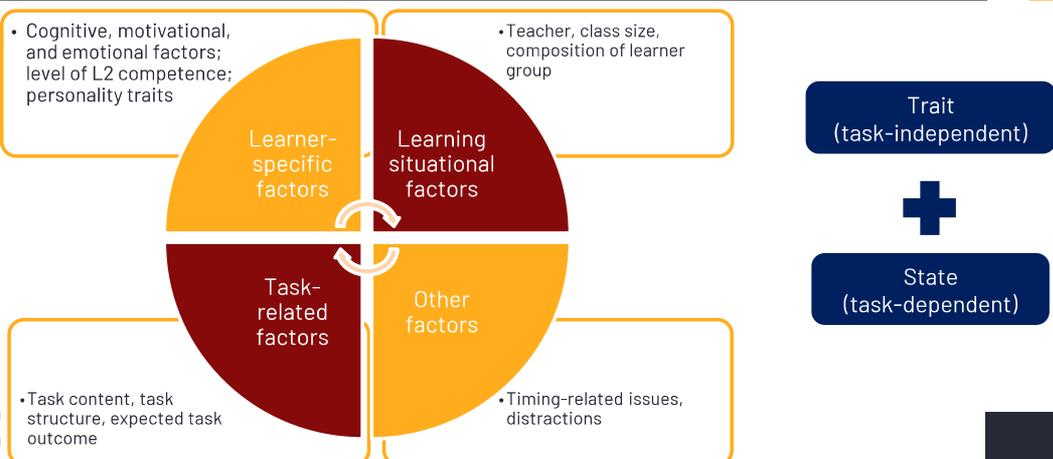
- Behavioral engagement - promoting writing fluency development through exact task repetition
- Cognitive engagement
  - Improving complexity and accuracy through exact task repetition and direct and indirect SWCF
  - Eliciting more LREs through procedural task repetition
  - SWCF raised learner attention to language during task performance (a high uptake rate)
- Emotional engagement - Students found both indirect and direct SWCF helpful; some learners prefer indirect SWCF (autonomy)

## Students' Emotional Engagement with Tasks and SWCF

- "Feedback is very helpful. Unlike other university classes, in language classes **when professors say I am wrong, then I am wrong. So I trust my teacher in my Korean class.**" (Participant #8)
- "I am very grateful for his help during tasks." (Participant #9)
- "The teacher now corrects things while we are doing it. I know I have a lot of errors like spelling and grammar. My partner and I can only pick up certain things because we are in 102. **Just marking them not even correcting them is helpful. It helps us to figure out what's wrong with it.**" (Participant #24)
- "I think it's a lot better than giving us the answers. **If he just told us what's wrong with it, we just look at them. And ok... I think the process of figuring out what's wrong with them help [sic] us to learn and remember them better.**" (Participant #22).

# Task Motivation

## Traditional Concept of Motivation (Dörnyei, 2019, p. 56)



## Four Motivation Conglomerates (Dörnyei, 2019)

- 1. Interest - integrates motivational, cognitive, and affective elements
- 2. Productive learner roles - become a useful member of the task team and perform necessary and complementary functions
- 3. Motivational flow - a state of intensive involvement in a task; "a heightened level of motivated task engagement" (p. 58)
  - A sense of control over the completion of the task
  - Clarity about the task goals
  - Focused attention
- 4. Vision - self-image of being a successful L2 user

## Task Motivation from an Engagement-Specific Perspective (Dörnyei, 2019)

- Engagement - "Active participation and involvement in certain behaviors" (p. 59)
- Allows the researchers to address both the motive and its manifestation in a unified concept: "When students are engaged, they are inevitably fueled by some motivation." (p. 60)
- "Motivation is undoubtedly necessary for 'preparing the deal,' but engagement is indispensable for sealing the deal." (p. 60)

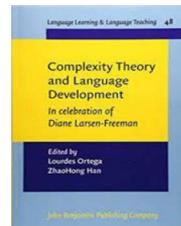
## What are important aspects of tasks that are associated with task engagement? (Dörnyei, 2019)

- Task presentation
- Task goals
- Task content
- Task ownership and challenges - skills balance
- Task structure
- Positive emotional tenor of task completion

## Dynamic Systems Theory and L2 Motivation Research

### Dynamic Systems Theory (Larsen-Freeman, 2015)

- Started as a branch of theoretical mathematics
- Studies systems that change through forces that do not follow predictable patterns of development
- Systems are constantly in interaction with their environment and reorganize themselves as a result of internal changes



## Dynamic Complexity Theory (Larsen-Freeman, 2016)

- Not complicated but complex
  - Complex systems are made up of many components which interact and give rise to patterns at another level of complexity.
- Open and dynamic
  - Take in and expend energy, matter, or information depending on the type of system, while showing the emergence of order



## Dynamic Complexity Theory and Task Motivation

tesol QUARTERLY  
#tesol2016

### *Implementation of a Localized Task-Based Course in an EFL Context: A Study of Students' Evolving Perceptions*

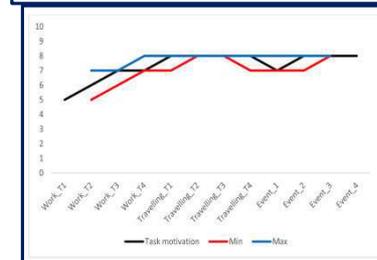
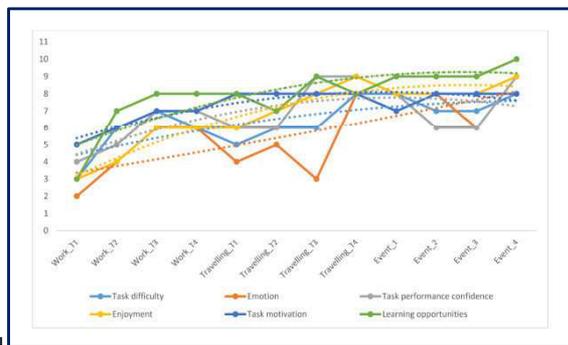
YOUJIN KIM AND YEONJOO JUNG  
Georgia State University  
Atlanta, Georgia, United States

NICOLE TRACY-VENTURA  
University of South Florida  
Tampa, Florida, United States

Despite a strong pedagogical orientation, the majority of research examining the effectiveness of task-based language teaching (TBLT) and perceptions toward TBLT has been investigated in isolation rather than embedded in larger curricular contexts (McDonough, 2015). The current study examines the process of developing a TBLT curriculum in South Korea and evolving perceptions toward this particular semester-long task-based course of students from one intact university class. Dynamic systems theory is used to investigate students' evolving perceptions of the new task-based course using two longitudinal data sources, surveys and portfolios. End-of-task unit surveys from 27 students and one focal participant's portfolio entries were analyzed both quantitatively and qualitatively. Findings demonstrate that students' perceptions toward TBLT changed over time and that diverse factors affected how learners feel about task-based instruction. Findings are discussed in light of developing localized TBLT curricula.  
doi: 10.1002/tesq.181

1. Designed a task-based syllabus for university English courses
2. Examined 27 students' evolving perceptions of task-based instruction over one semester (task difficulty, emotion, task performance confidence, enjoyment, task motivation, learning opportunities)
3. Interpreted students' perception changes from a dynamic complexity theory perspective

## Dynamic Complexity Theory and Task Motivation



## Part 3: Practical suggestions for ways to improve engagement and task motivation in classroom contexts

## Supporting Your Students' Engagement during Task Performance

### Instructional Context

Students: High beginner/low intermediate Japanese University students who are enrolled in business English classes

Goal: To improve English proficiency in general and business English in particular

### Collaborators



Dr. Minkyung Kim  
Nagoya University of  
Commerce and  
Business (NUCB)



Sanghee Kang  
Georgia State University

## 1. Promoting Task Engagement by Providing carefully-designed Collaborative Tasks

## Collaborative E-mail-Writing Task

Directions: Read the scenario carefully, and write an e-mail in pairs. Feel free to add details that are necessary. You have 20 minutes to complete the email.

Scenario: You and your partner work at Yahoo Japan. Currently, you and your partner are busy working on a project. Today you and your partner missed an important meeting because of the following reasons (come up with at least two reasons). Write an email to your boss to ask for meeting materials.

New Message

To Melinda Jones

Subject Meeting materials

Dear Ms. Jones,

## Collaborative Customer Service Task Scenario

**Student A** (a customer) is going to buy a tablet PC for his/her brother. **Student A** has an online chat with **Student B** (a salesperson) on the Bic Camera website. Based on the information that Student A collects from the salesperson, Student A will decide what kind of tablet PC that he/she will buy for his/her brother.

Online  
Chat

## 2. Promoting Various Dimensions of Task Engagement by Modelling Collaborative Task Performance

The screenshot shows a Google Docs interface titled "Email\_Collaborative Writing". The document contains the following text:

Directions: Read the scenario carefully, and write an e-mail in pairs. Feel free to add details that are necessary. You have 20 minutes to complete the email.

Scenario: You and your partner currently working at Yahoo Japan. Currently, you and your partner are busy working on a project. Today you and your partner missed an important meeting because of the following reasons (come up with at least two reasons). Write an email to your boss to ask for meeting materials.

New Message  
To Melinda Jones  
Subject Meeting materials  
Dear M

Two video thumbnails are visible in the top right corner, labeled "Student A" and "Student B".

**Student A: Dear Ms. Jones..**  
**Student B: Ok. I think that looks good.**

### 3. Promoting Task Engagement through Teachers' Synchronous Corrective Feedback

#### Synchronous Written Corrective Feedback (SWCF)

- Indirect SWCF
  - Encourages students to pay attention to language while focusing on creating meaning either individually or in groups [[cognitive engagement](#)]
  - Facilitates helpful interaction during collaboration [[social engagement](#)]
  - Promotes students' feeling of purposeful engagement [[affective engagement](#)]; but may cause lowering of confidence compared to direct SWCF

## Synchronous Written Corrective Feedback (SWCF)

- Use of technology such as Google Docs, Google Slides, and Microsoft Teams
- Can offer multimodal SWCF - oral and written feedback on students' writing of various genres (e.g., informal-formal) via various communication platforms (video, chats)

## Sample Video Screen Shot of Indirect WCF and Uptake

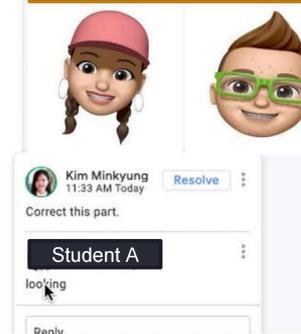
Scene 1: Greetings (A customer starts an on-line chat with a salesperson at the Bic Camera website.)

Salesperson How can I help you?

Customer I am **look** for a tablet PC for my brother.

Salesperson Okay!

Promoting Task Engagement - Cognitive, Emotional



## 4. Promoting Task Engagement through Task Repetition

## Teaching How to Make Complaints in Diverse Social Contexts through Tasks

### Strategies of Complaints

	Directedness	Strategies of complaints	Examples	Softening complaints
↑ ↓	Direct	Threat/warning	<i>If you are late again, I will make you wait for me for hours.</i>	<b>[sentence level]</b> Could you ...? Would you ...? I was wondering ... Would you mind if ...
	Direct	Explicit complaint	<i>You've been late so many times!</i>	
	Indirect	Requesting an explanation	<i>How come you've never showed up on time?</i>	
	Indirect	Suggesting	<i>Leaving your home earlier would be helpful.</i>	<b>[word level]</b> please possibly, perhaps, maybe I think, I guess, in my opinion kind of, sort of, more or less
	Indirect	Request for repair	<i>Can you show up on time please?</i>	
	Indirect	Expression of dissatisfaction	<i>I have to wait for you all the time and I feel it's a waste of time.</i>	
	Indirect	No explicit blaming	<i>I know you have a lot going on.</i>	

### When do we use direct or indirect complaints?

Social power	Social distance	Seriousness of the situation	Complaint strategies
↑ high	↑ distant	↑ very serious	↑ direct
↓ low	↓ close	↓ not serious	↓ indirect

## Teaching How to Apologize in Diverse Social Contexts through Tasks

Main apology strategies	Examples	
	Simple forms	Complex forms
Offering apology	I am sorry. I am sorry for this. I apologize for this.  I am truly sorry about it. I sincerely apologize.	I would like to apologize for this.  I am so sorry that I made a terrible mistake. I apologize that I made a terrible mistake.  I am wondering if you could accept my apology.
Request for forgiveness	Please forgive me. Could you please forgive me? I hope that you will forgive me.	
Additional apology strategies		
Explanation of the inappropriate behavior	I was stuck in a traffic jam.	
Expression of the speaker's responsibility for the offense a. explicit self-blame b. expressing lack of intent c. acknowledgement d. admission of fact	It's my fault/my mistake. I didn't mean to upset you. I shouldn't have done it. I'm late.	
Offering of repair	I'll buy you a new one.	
Promising for the better	It won't happen again.	
Minimizing the degree of offense	It's not the end of the world.	
Speaker showing concerns for the offended person	I hope you weren't offended.	
Intensifier	really, very, so, extremely, truly	
Softener	possibly, probably, maybe	

## Teaching Pragmatics (complaint and apology) through Procedural Task Repetition

### ■ Drama Script-Writing Task

Nobu (Writer A) and George (Writer B) have been roommates for the last ten months. Although they agreed to clean the house together on Sundays, Nobu has never cleaned it. George is complaining about this to Nobu, and Nobu is apologizing to George.

Complaint: =power, Apology: =power

Ms. Suzuki (Writer A) has purchased groceries from the same supermarket and used their delivery services over many years. Thus, customer staff members treat her like a VIP member. In many recent orders, Ms. Suzuki has experienced missing items. Ms. Suzuki is complaining about this to a customer service staff member, Andy (Writer B), and Andy is apologizing to Ms. Suzuki.

Complaint: -power, Apology: +power

Harue (Writer A) has taken three classes with Professor Murphy (Writer B) and respects her a lot as his professor. Professor Murphy has promised to return students' midterm papers with her feedback and comments in one week. However, Professor Murphy has not returned the papers for one month. Harue is complaining about this to Professor Murphy, and Professor Murphy is apologizing to Harue.

Complaint: +power, Apology: -power

## Procedural Task Repetition, SWCF, and Developing Pragmatics Competence

File Edit View Insert Format Tools Add-ons Help Last edit was made on October 15 by...

80% Normal text Arial 11 B I U A

1 2 3 4 5 6 7

Harue hi.Ms.murphy.

Murphy Hi, Harue. What happened?

Harue I am wondering whether you graded our midterm papers. ~~Can you return the report I submitted to you?~~

Murphy Oh! I forgot it.

Harue Oh I see.I have been waiting for my paper with comments.~~return.~~

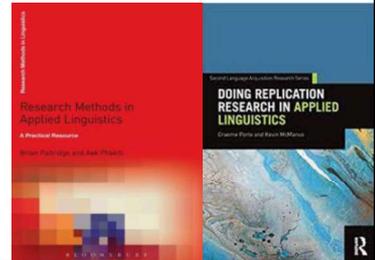
Minkyung Kim 10:44 PM Oct 15  
Talking to a professor, More polite way of complaining is needed (indirect)

Minkyung Kim 10:44 PM Oct 15  
Esnek kishikik

## Part 4: Future directions of task engagement and motivation research

## Directions for Future Investigation of Task Engagement and Motivation

- Well-designed empirical research examining the interdependence among diverse dimensions of task engagement (cognitive, emotional, behavioral, social)
  - Replication of previous task research
  - Mixed-methods research
  - Longitudinal research
  - Clear connection between constructs and operationalizations



## Directions for Future Investigation of Task Engagement and Motivation

- Research Goals
  - Examining interdependence of different dimensions of engagement (social, behavioral, affective, cognitive)
  - Exploring evolving task engagement and task motivation over time
  - Examining how to encourage students' engagement with tasks through task design and implementing research in classroom contexts (Researcher-teacher collaboration)
  - Investigating what aspects of L2 task motivation encourage students to be engaged with tasks
  - Investigating both short-term and long-term language learning

## Directions for Future Investigation of Task Engagement and Motivation

- Task Design and Implementation
  - Expanding Target-Language Use (TLU) Domain



## Special issue on remote/online teaching and learning



1. The effectiveness of **app-based language instruction** for developing receptive linguistic knowledge and oral communicative ability (Shawn Loewen, Daniel R. Isbell, Zachary Sporn)
2. Metaphors for **social media-enhanced foreign language teaching and learning** (Jonathon Reinhardt)
3. Developing L2 productive language skills online and the strategic use of instructional tools (J. Scott Payne)
4. Using **games** for language learning in the age of social distancing (Sébastien Dubreil)
5. **Collaborative tasks** for online language teaching (Marta González-Lloret)
6. **Teacher professional development and online instruction: Cultivating coherence and sustainability** (Kate Paesani)
7. **Establishing professional online communities for world language educators** (Stephanie W. P. Knight)
8. Creating and sustaining **virtual language communities** (Lara Lomicka)
9. The new normal?: **A pandemic of task engagement in language learning** (Joy Egbert)
10. **Zooming out of the crisis: Language and human collaboration** (Gabriel Guillén, Thor Sawin, Netta Avineri)
11. **Digitally mediated remote learning of pragmatics** (Naoko Taguchi)
12. Planned online language education versus crisis-prompted online language teaching: Lessons for the future (Adam Gacs, Senta Goertler, Shannon Spasova)

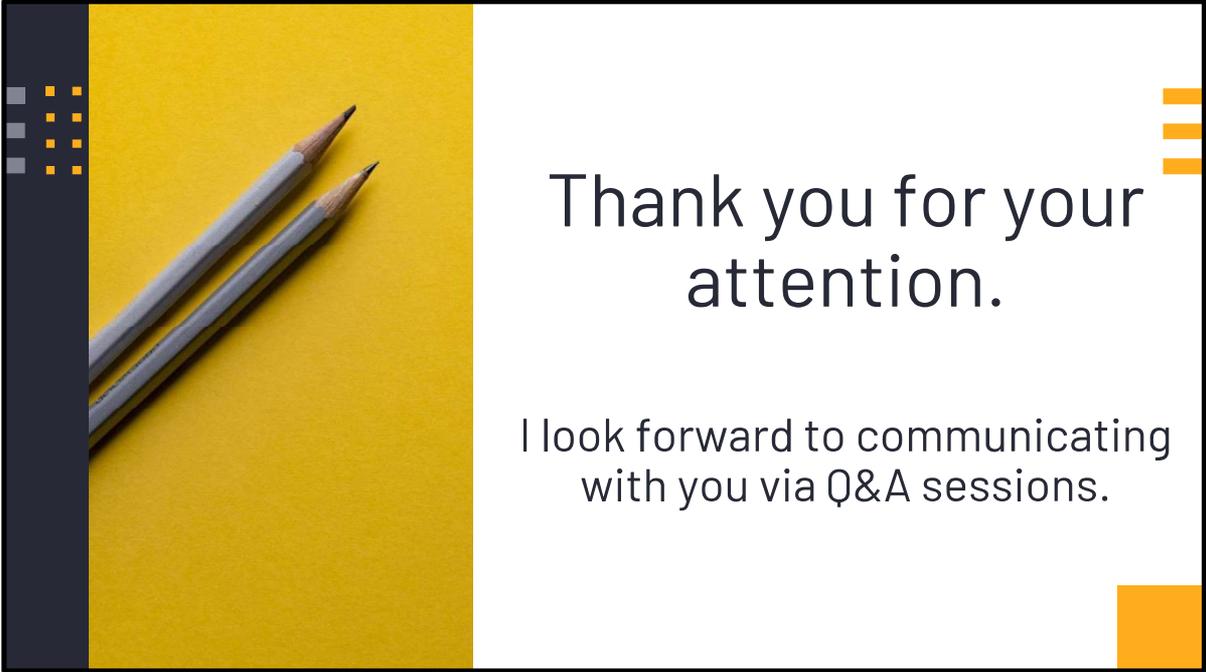
## Directions for Future Investigation of Task Engagement and Motivation

- Task Design and Implementation
  - Expanding Target-Language Use (TLU) Domain
  - Going beyond monomodal tasks (i.e., multimodal tasks)



## Directions for Future Investigation of Task Engagement and Motivation

- Data Triangulation
  - Task performance (behavioral and cognitive)
  - Learner-internal introspective verbal report data (stimulated recalls, think-alouds)
  - Surveys
  - Multimodal data (both verbal and non-verbal)



Thank you for your  
attention.

I look forward to communicating  
with you via Q&A sessions.

## **Advancing Holistic Assessment of Young Learners' Cognitive, Metacognitive, and Psychological Orientations Through Artificial Intelligence**

Eunice Eunhee Jang  
(University of Toronto)

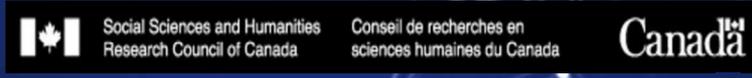
The fundamental aspect of assessment and measurement lies in making sense of actions conditional upon latent mechanisms. Actions associated with learning reflect the confluence of learner traits and contextual factors. Technological advances afford a more holistic understanding of the learner as a whole. Building on such intricate understandings, BalanceAI engages students in multifaceted learning activities and provides automated feedback through transformative artificial intelligence-based technologies (<https://www.oise.utoronto.ca/ejanglab/research/balanceai/>). In this talk, I introduce a series of research done by the IDELA research group using BalanceAI and discuss emerging issues critical for optimizing the integration of AI to education.



**Eunice Eunhee Jang** is Professor at the Department of Applied Psychology and Human Development in Ontario Institute for Studies in Education, University of Toronto. With specializations in diagnostic language assessment, technology-rich learning and assessment, mixed methods research, and program evaluation, Dr. Jang has led high-impact provincial, national, and international research with various stakeholders. She is the author of the book, *Focus on Assessment* (Oxford University Press, 2014), which provides evidence-based assessment guidelines for K-12 language teachers. She is the co-author of the research monograph, *OECD Reviews on Evaluation and Assessment in Education: Denmark* with Shewbridge, Matthews, and Santiago. She is the recipient of the annual award for the most outstanding article of the year for a paper published in the *Journal of Language Learning* in 2013. Her current BalanceAI project examines ways to promote students' cognitive and metacognitive development through innovative learning-oriented assessments based on machine learning applications (See <https://www.oise.utoronto.ca/ejanglab/>)

# Advancing Holistic Assessment of Young Learners' C.A.M.M. through Artificial Intelligence

Eunice Eunhee Jang, PhD  
APHD, OISE/UT



1

Assessment

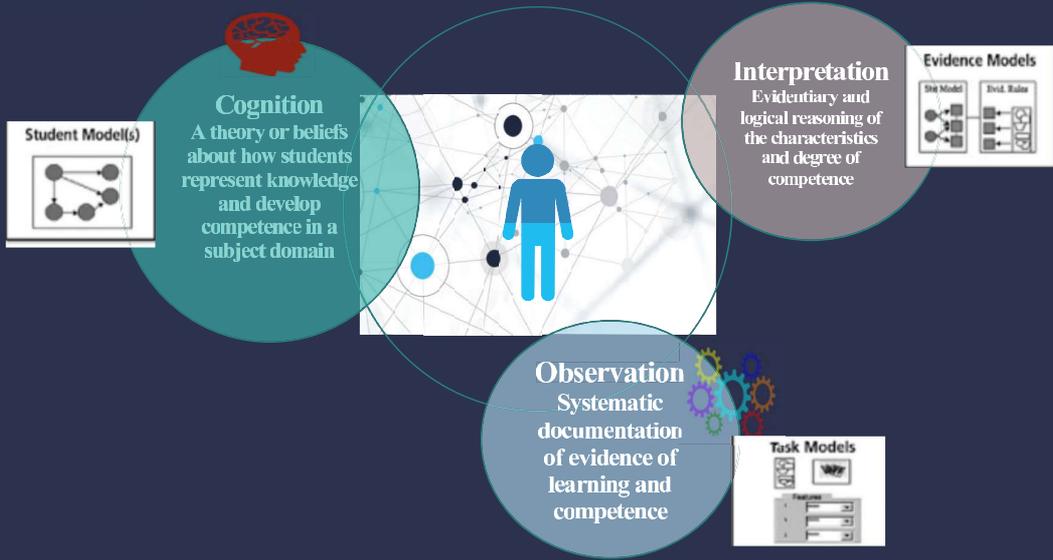
Measurement

Evaluation



2

# Assessment Triangle (Pellegrino et al., 2001)



## CAMM Student Model



Theory of Mind

Cognitive Model

Complex Mediation

Understanding self-concepts and others' mental states

What's the underlying mechanism of growth in learning?

How is CAM<sup>2</sup> mediated through social, contextual interaction?

# Task Model



Self report  
Test  
Expert ratings  
Interviews

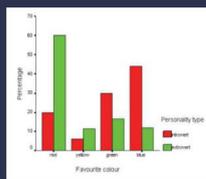


Think alouds  
Error detection

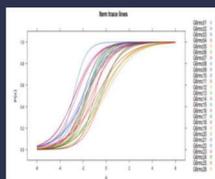


Observational  
Eye tracking  
Facial expression  
Physiological logs  
Direct  
Observational  
Less intrusive

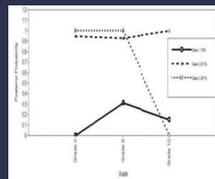
# Evidence Model



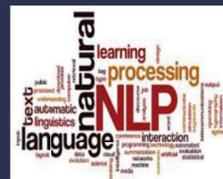
Frequentist Model



Latent Trait Model



Latent Class Model



Natural Input Processing



Machine Learning



**BalanceAI**  
Blended Assessment of Literacy and Numeracy in Classroom Environments

**COMPREHENSIVE ASSESSMENT**  
Cognition, Literacy, Oral Language. BalanceAI supports potential and growth in the child's language, literacy, cognition, and motivation.

**INTELLIGENT FEEDBACK FOR TEACHERS**  
Feedback for teachers is known to have significant positive effects on student learning. BalanceAI provides customized timely feedback.

**DEVELOPMENTALLY SENSITIVE TASKS**  
BalanceAI identifies markers of oral language, literacy, and cognitive reasoning using age-appropriate learning tasks (e.g., reading a story out loud, retelling a story, solving puzzles, recalling strings of words).

**CHILDREN'S PSYCHOLOGICAL LEARNING ORIENTATIONS**  
BalanceAI assesses the child's self-efficacy, motivation, self-regulation and grit, which is used to guide learning processes.

**STRENGTHS-BASED ASSESSMENT**  
BalanceAI is grounded in the belief that every child has the potential to succeed in school. It nurtures a growth-mindset in children.

Visit: <https://www.oise.utoronto.ca/riajlab/about-balanceai/>  
Contact: Hyunah Kim (hokyunah.kim@mail.utoronto.ca)

**BalanceAI**

# Task Specifications

**1. BALLI**

Assessment of Ability, Attitude towards Learning, Regulation, and Grit

4/4

Incomplete Continue >

Reading self-efficacy: 11 ( $\alpha=.87$ )  
 Writing self-efficacy: 6 ( $\alpha=.69$ )  
 Motivation: 9 ( $\alpha=.81$ )  
 SRL: 9 ( $\alpha=.84$ )  
 Grit: 10 ( $\alpha=.80$ )

**2. BALA**

Assessment of Reading Comprehension and Writing Skills

10/18

Incomplete Continue >

5 RC testlets  
 Perceived understanding  
 Degree of interest  
 Students' self-generated questions  
 Comprehension  
 2 Writing Tasks

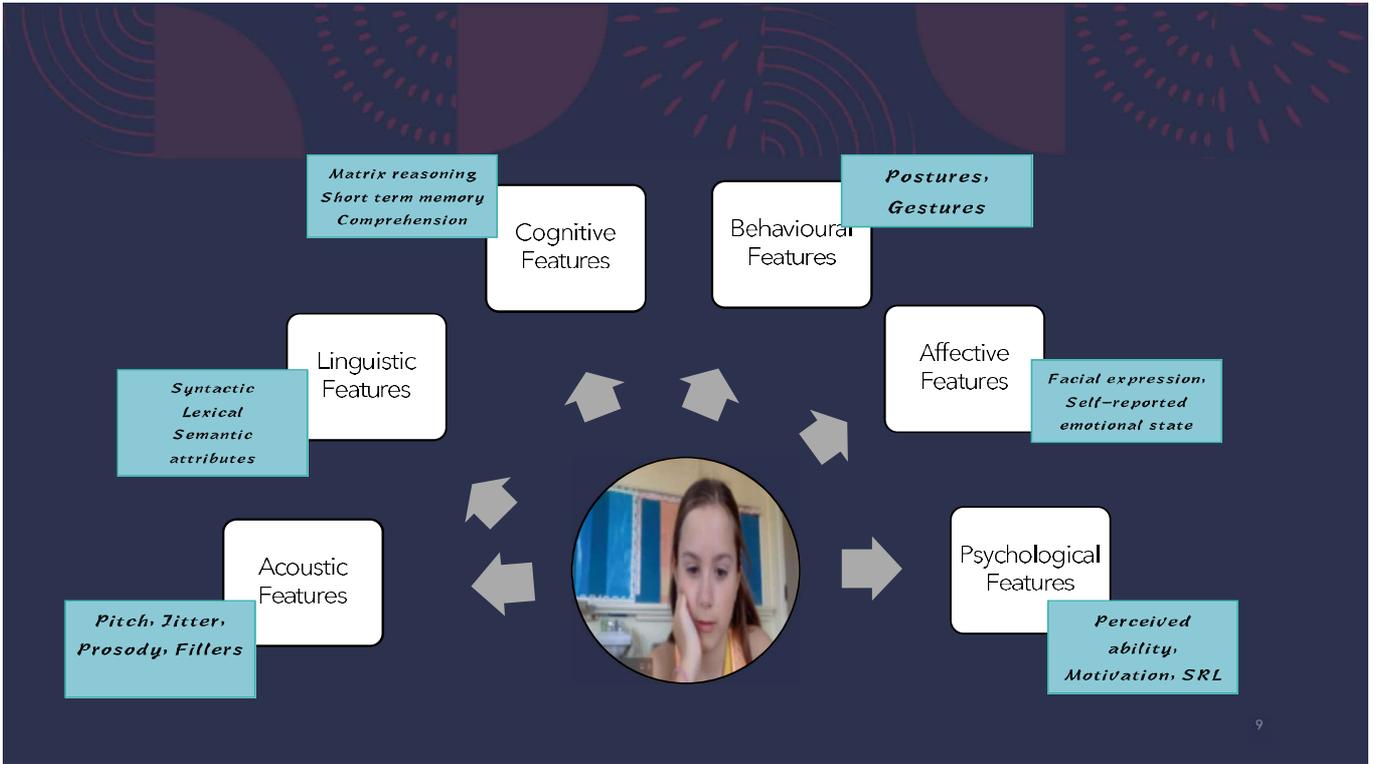
**3. TALK2ME JR.**

Innovative and Interactive Language and Learning Tasks

1/6

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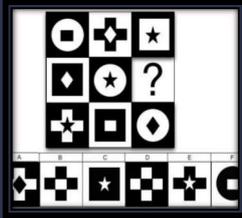
4 oral 2 cog. Tasks  
 Oral reading fluency  
 Picture description  
 Story retell  
 Elision  
 Short-term memory  
 Pattern reasoning



## 2018-2019 Field Research

- 
 240 Students in Grades 4-6 from 3 TDSB schools
- 
 Over 2000 children's oral performance samples plus reading and writing performance data
- 
 Teacher Holistic Diagnostic Reports




10

# RESEARCH ON STUDENT MODEL

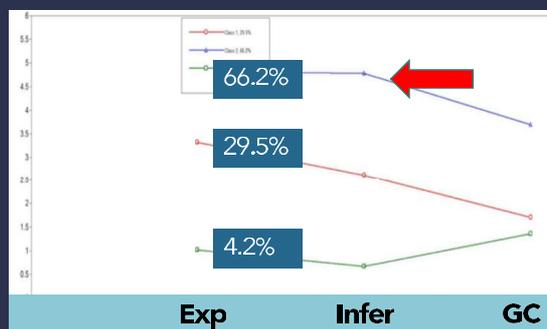
## Learner Profiling

### Cognitive Diagnostic Model

### Latent Profile Analysis

- N=132, G-DINA in R, Classes 001 & 011 are excluded. Explicit-Inferencing-Global discourse comprehension

Latent Skill Profile	Class Probability
000	20%
100	1%
010	4%
110	9%
111	63%

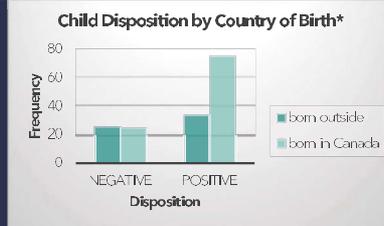


# Self-Concepts & Skill Profiles (Jang, 2019)



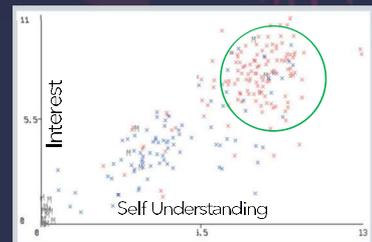
$\chi^2_{(1)}=12.2, p=.000$   
 $r_{\phi}=.28$

Skill Masters Tend to be Associated with Positive Learning Orientations.



$\chi^2_{(1)}=6.16, p=.013$   $r_{\phi}=.2$

Immigrant students tend to be more associated with negative learning orientations



Skill masters tend to show a higher level of perceived understanding of and interest in the text they read.

## Relationship between student generated questions and reading ability and its mediating factors

### Student Generated Questions



#### Student Agency

Promote learner-centred approach to assessment



#### Critical Thinking

From factual to conceptual, higher-order thinking questions

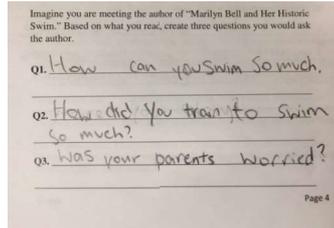


#### Present Study

Relationship between the quality of SGQs and students' RC and self-concepts

# Assessing the Quality of SGQ's

	Narrative	Expository
Title	Marilyn Bell and her historic swim	What do bats eat?
Word #	298	446
Words/sen	13.5	13.9
Syn. Comp	50	47
Acad. Voc.	47	48
Lex. cohesion	26	71
Complexity	700	480
Grade level	7	5



Create 3 questions you would ask the author/bat expert.

	Cognitive Domain					
	Remember	Understand	Apply	Analyze	Synthesize	Evaluate
Knowledge Domain	Factual	Level 1 Explicit	Level 2 Implicit			
	Conceptual			Level 3 Inferential (lower-level)	Level 4 Inferential (higher-level)	
	Procedural					Level 5 Critical appraisal (lower-level)
	Metacognitive					Level 6 Critical appraisal (higher-level)

15

## Quality of Student Generated Questions



Predicted by the level of positive attitude to writing, self-rated level of understanding, and reading comprehension



For narrative text, positive attitude to writing, self-rated understanding predict SGQ quality



Expository text requires a higher level of textual comprehension for students to generate high quality questions

	Overall	
	<i>r</i>	<i>b</i>
Attitude: reading	.23	
Attitude: writing	.46	<b>0.94***</b>
Interest	.02	
Self-rated understanding	.43	<b>1.36***</b>
Reading comprehension	.35	<b>0.39***</b>
	Adj. R <sup>2</sup> = .33	

	Narrative		Expository	
	<i>r</i>	<i>b</i>	<i>r</i>	<i>b</i>
Attitude: reading	.11		.24	
Attitude: writing	.41	<b>0.83***</b>	.15	
Interest	.06		.09	
Self-rated understanding	.29	<b>1.42***</b>	.17	
Reading comprehension	.05		.26	<b>.50***</b>
	Adj. R <sup>2</sup> = .24		Adj. R <sup>2</sup> = .11	

# Investigating the Role of Vocabulary and Working Memory in Aurally and Visually Presented Phonemic Deletion Tasks Among EL1 and ELL Students

## Phonemic Awareness

  
Phonological Awareness

As students' vocabulary increases in breadth and depth, their phonological system improves.

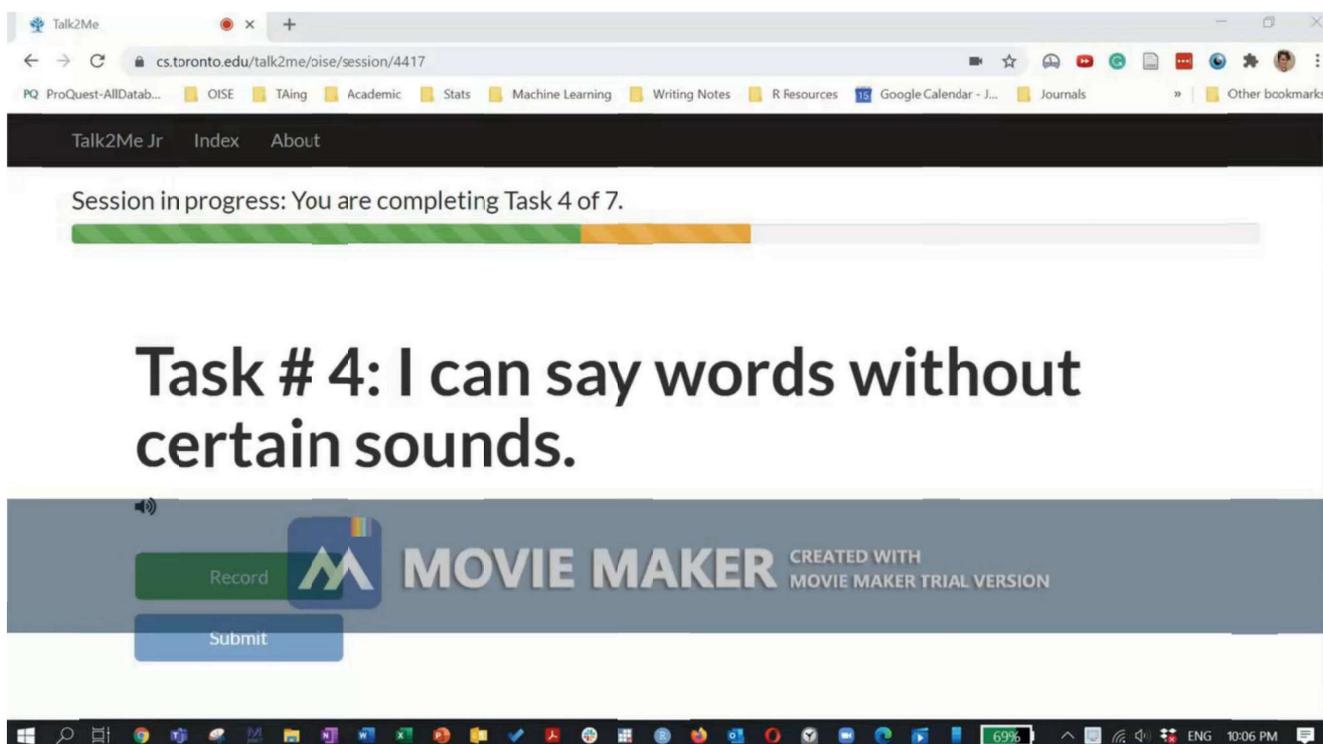
  
Mechanism

Role of working memory in processing auditory and visual stimuli

  
Present Study

Elision listen and elision visual predicted by working memory and vocabulary with language background as moderator

17



Talk2Me

cs.toronto.edu/talk2me/aise/session/4417

Talk2Me Jr Index About

Session in progress: You are completing Task 4 of 7.

# Task # 4: I can say words without certain sounds.

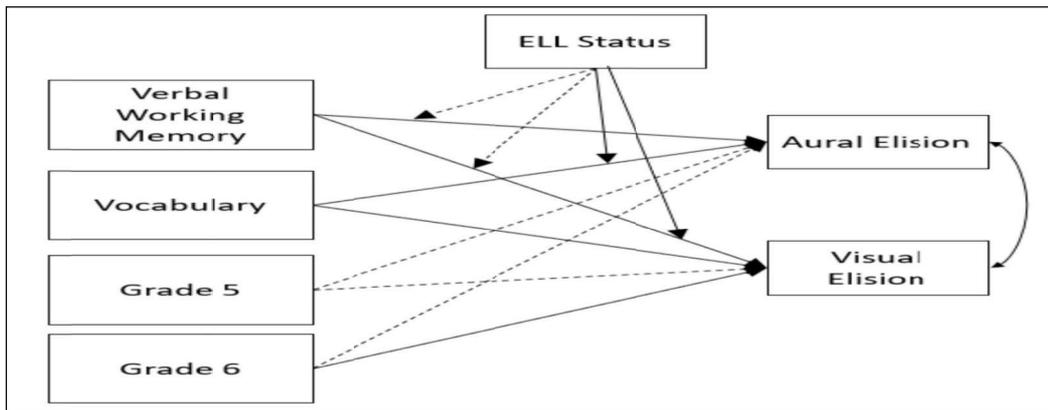
Record

Submit

MOVIE MAKER CREATED WITH MOVIE MAKER TRIAL VERSION

69% ENG 10:06 PM

## Investigating Predictors of Elision: Testing the Lexical Restructuring Model



19

### ELL Moderation Effect: Steeper Vocabulary Slope Among ELL Students Across Modalities



Verbal working memory, vocabulary, Grade, and ELL status predict both aural phonemic deletion and a visually-presented phonemic deletion task among students in the upper elementary grades



Vocabulary not verbal working memory

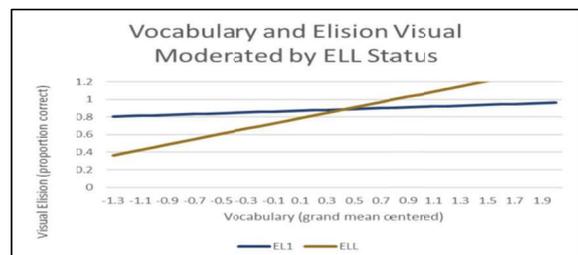


Vocabulary is significantly more predictive of elision performance for ELL students compared to EL1 students



22.5% of the variance in aural elision and 33.5% of the variance in visual elision

		<i>Unstandardized B</i>	<i>Standardized β</i>	<i>P</i>
Elision (L)	Working Memory	0.422	.222	.001
	Vocabulary	0.066	.215	.006
	ELL	-0.027	-.056	.463
	ELL*VOC	0.218	.25	< .001
Elision (V)	Working Memory	0.413	.223	.009
	Vocabulary	0.048	.159	.02
	G6 vs. G4	0.088	.196	< .001
	G5 vs. G4			
	ELL	-0.109	-.231	.012
	ELL*VOC	0.23	.298	.004



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# RESEARCH ON EVIDENCE MODEL

NATURAL LANGUAGE PROCESSING BASED MACHINE LEARNING



## Machine Learning (ML)



Application of Artificial Intelligence to build computer algorithms that allow for automate classification, prediction, and recommendation based on improvement through data



Natural Language Processing (NLP) is a branch of AI that allows the machine to hear, read, comprehend, and derive meaning from human language.



**Supervised** ML algorithms model relationship between the output (categorical) and input features in order to predict output values for new data based on what it has learned from previous data sets.



**Unsupervised** ML uses pattern recognition through clustering and descriptive modeling without specific target output categories or labels of the data.



**Reinforcement** ML interacts with its environment and continuously learns by taking actions that maximizes the reward (AlphaGo)

## Investigated linguistic and contextual sensitivity in automated speech recognition software: Implications for use in education

### Automated Speech Recognition



Advance of ASR

Expansion of the possibilities for assessing oral communication using authentic tasks



Paucity of Research

A paucity of research on their accuracy with children's speech performance

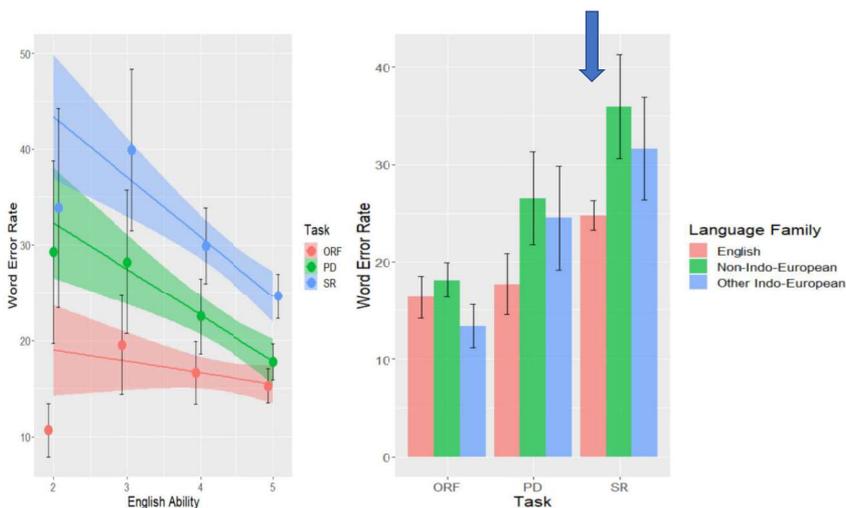


Present Study

Comparability of 3 speech-to-text ASR technologies' accuracy among children from different linguistic backgrounds with different tasks

25

## How Student's Language Background Affects ASR Performance



- Insignificant difference between Language background nor English ability with restricted oral tasks (e.g., oral reading fluency)
- Significant difference by language and task with fluid oral tasks (e.g., picture description)
- With more complex and fluid task (e.g., story recall), the difference is greatest

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# Comparing ASR Accuracy with Native and Non-Native English Speakers

**Native English**  
 Reading Record Score: 0 Miscues  
 ASR Error Rate: 3.3% – 1 Error



I'm finally done with my English Homework, Anton told his mom his mom gave him **that** look and asked oh really. It took me an hour and a half. Now I better not wait to start my math. Anton quickly took out his work. This should not take too long. In fact, it should only take about ten minutes.

**Non-Indo-European (Japanese)**  
 Reading Record Score: 0 Miscues  
 ASR Error Rate 14.8% – 9 Errors



I am finally done with my English homework Anton **told** his mom **is small** gave him a look and asked **your Lee** it took me an hour and a half now I better not wait to start my math Anton quickly took **off at** his work this should not take too long **and fat** it should only take about ten minutes

## Oral Reading Fluency

ORF Instructions 



Student A



Oral Reading (Proficient Reader)

- Grade 5, Female
- Canadian-born
- WCPM: 163.6
- 1 Self-correction

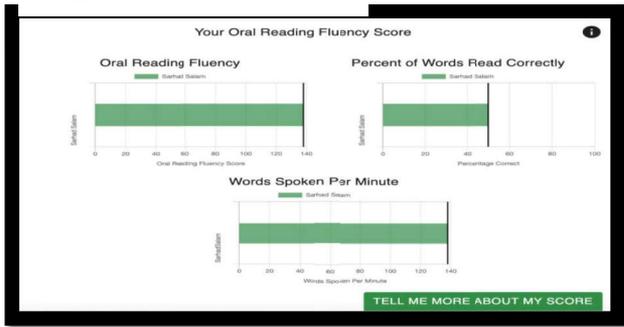
Student B



Oral Reading (Less-proficient Reader)

- Grade 5, Female
- Arrived in Canada at age 9
- WCPM: 43.3
- 1 deletion, 7 substitutions, 2 self-corrections

 **BalanceAI** Dashboard  
21<sup>st</sup> century literacy and language assessment tool

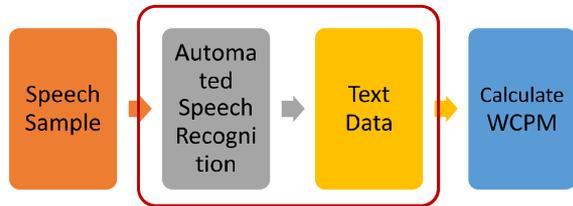


2017 Fluency Norm Chart (Hasbrouck & Tindal, 2017)

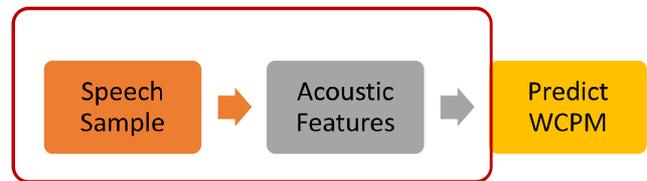
	90	179	183	195
	75	153	160	169
	50	121	133	146
	25	87	109	119
	10	64	84	102
<b>5</b>				

Below 50% percentile in Grade 1

## Speech to Text for WCPM Estimation

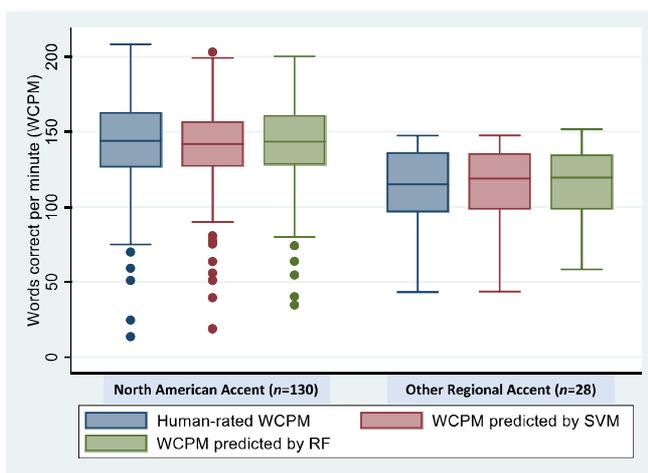


## Speech to Acoustic Features for WCPM Prediction



29

Can acoustic features of students' oral reading predict their oral reading fluency?



30

## Automated Scoring of Children's Story Retelling for Oral Language Assessment

### Oral Language Proficiency



#### Foundation

for language development



#### Story Retelling

Aural Story Retell (SRa)  
Written Story Retell (SRw)



#### Present Study

Robustness of NLP models in predicting human scores of children's OLP

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## Oral Story Retell Tasks



Listen to the Story



Retell the Story (S1)



Retell the Story (S2)

32

# Human Scoring of Children’s Story Retelling for Oral Language Assessment

Table 1. Inter-Rater Reliability Range for Human Scored Oral Narrative Tasks

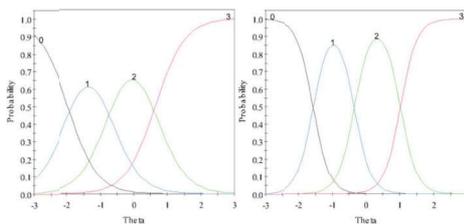
Variables	SRa	SRw
Vocabulary	.83-.96	.76-.97
Grammar	.73-1.00	.84-.97
Idea Development	.40-.97	.75-.98
Purposeful Communication	.93-1.00	.91-1.00
Comprehensibility	.34-.98	.80-.97

Note: SRa = Aural Story Retell; SRw = Written Story Retell

Table 2. Item Statistics

Variable	M (SD)	Item-Total Correlation
SRa Vocabulary	2.99 (0.84)	.76
SRa Grammar	3.00 (0.91)	.74
SRa Idea Development	2.90 (0.76)	.70
SRa Purposeful Communication	3.47 (0.69)	.61
SRa Comprehensibility	3.29 (0.76)	.61
SRw Vocabulary	2.68 (0.88)	.70
SRw Grammar	2.73 (0.85)	.81
SRw Idea Development	2.54 (0.85)	.71
SRw Purposeful Communication	2.69 (0.84)	.62
SRw Comprehensibility	3.08 (0.89)	.64

## Key Findings

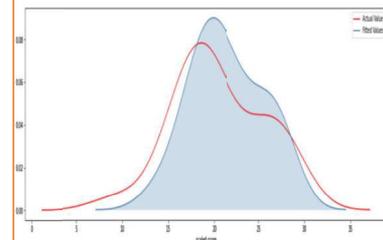


Higher discrimination and higher human scores for written story retell over aural

Three IRT Model Comparison  
 Note. -2LL = -2 log likelihood; AIC = Akaike Information Criterion; BIC=Bayesian Information Criterion.

Model	-2 LL	AIC	BIC
Unidimensional	2770.97	2850.17	2979.29
Multi-unidimensional	2725.74	2807.74	2939.99
Bifactor	2707.06	2797.06	2942.22

Bi-factor best fits the data, confirming stimulus effects.



ML predicted OLP human scores with 89.91% accuracy, accounting for 70% total variance

## Affective learning in computer-rich environment: Triangulating multimodal data

### Affective Learning



Self Reported Affective States

Students' interpretation of their affective states during task performance



Behavioural Indicators of Affect

Researchers' observation of students' affective states during task performance

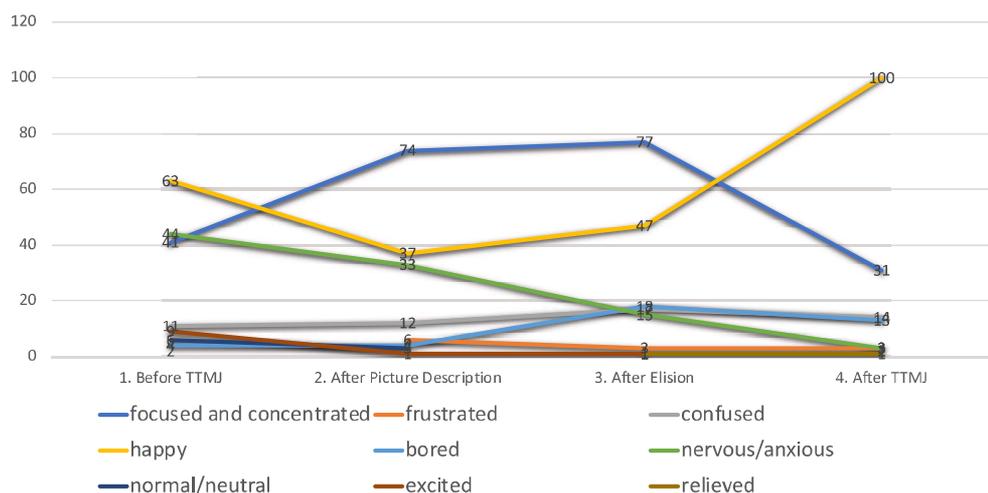


Facial Expression

Machine's emotion detection from facial expressions

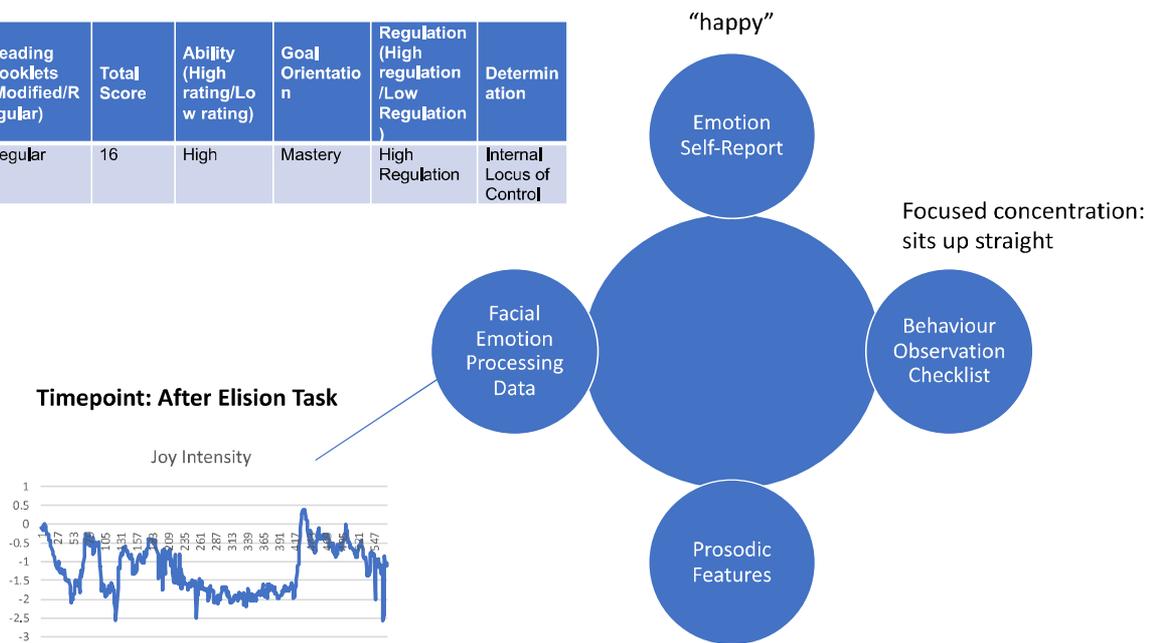
35

## Students' Self-Reported Affective States across Oral Tasks



36

Reading Profile	Reading Booklets (Modified/Regular)	Total Score	Ability (High rating/Low rating)	Goal Orientation	Regulation (High regulation /Low Regulation)	Determination
Strong Reader	Regular	16	High	Mastery	High Regulation	Internal Locus of Control



## Emotion recognition and confidence ratings predicted by vocal stimulus type and prosodic parameters (Lausen & Hammerschmidt, 2020)

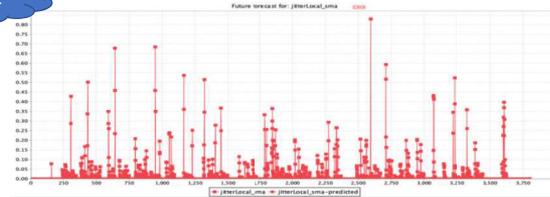
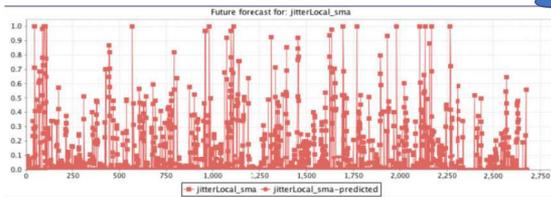
A series of statistics on these paralinguistic features has revealed that parameters related to pitch or fundamental frequency ( $F_0$ ) (e.g., minimum, maximum, mean, jitter), energy/amplitude- (e.g., loudness, shimmer), temporal (e.g., duration) and quality parameters (e.g., harmonics-to-noise ratio [HNR]) are amongst the most important **'candidates' for prosodic correlates of emotion in speech** (e.g., Juslin and Laukka, [2003](#); Johnstone and Scherer, [2000](#))".

# Time Series Forecasting of Prosodic Jitter Feature Oral Reading Fluency & Picture Description Tasks

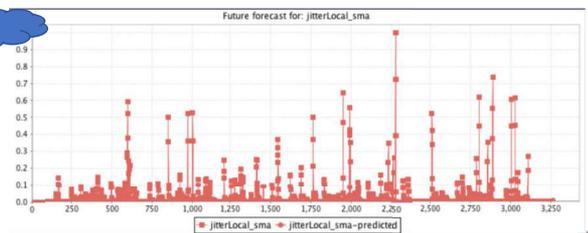
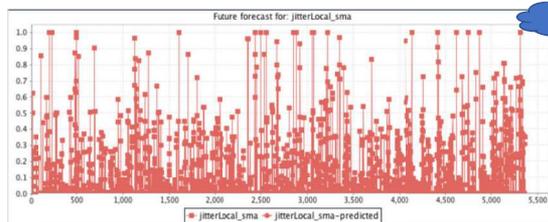
ID869: Canadian mono, IEP, G6, Positive learning orientation

ID808: Multi Farsi ESL, G5, Positive learning orientation

ORF



PIC



## Concluding Remarks



Educational mechanisms of growth and change need to be grounded in deep understanding of learners' C.A.M.M.



Automated scoring of written and oral input allows for authentic, performative assessment for teachers, keeping them up with other professional fields.



Technology-mediated learning and assessment may contribute to closing existing gaps due to inequity in access.



ML algorithms performance is subject to the quality of input attributes

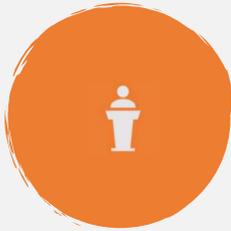


More active research on young learner speech and NLP-based AI applications to address issues of cultural, linguistic, and developmental sensitivity



BalanceAI Community Outreach Tutoring Program

Partnership with UTS Bridge Program, UT CAUSE Tutoring, & Afghanistan Women's Association



BalanceAI in Schools

Associated Hebrew Schools (N=900)



TDSB Virtual Schools

Resources for virtual school teachers across 4 Learning Centers



## MORE INFORMATION

<https://www.oise.utoronto.ca/eianglab/>

<https://balanceai.ca/#/home>

<https://www.facebook.com/IDELA.Lab>

## JOIN RESEARCH

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- TextStat: <https://github.com/shivam5992/textstat>
- PyCaret: <https://pycaret.org/>



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# Examining the Use of Scenario-Based Assessment to Measure the English Language Proficiency of Young Learners

Alexis A. Lopez  
(Educational Testing Service)

Scenario-based assessment is a fairly recent approach to assessment that uses carefully sequenced, thematically related tasks designed to simulate real-life performance. Scenario-based assessment also incorporates feedback, simulated assistance, interaction, and integration of language skills. In this presentation I will highlight the main features of scenario-based assessment, demonstrate a few scenario-based assessment tasks, and examine the potential of scenario-based assessment as a technique for measuring the English language proficiency of young learners.



**Alexis A. Lopez** is a Research Scientist in the English Language Learning and Assessment Center at Educational Testing Service (ETS) in Princeton, New Jersey. His areas of interest include assessing the language proficiency and content knowledge of English learners (ELs) in K-12 public schools in the United States. His work at ETS has focused on developing more accessible content assessments for ELs, examining how technology can be used to improve classroom assessments for ELs, and examining the use of dual language assessments. Alexis earned a Ph.D. in Education with a certificate in Advanced Study in Second Language Acquisition and Teacher Education from the University of Illinois at Urbana-Champaign. He also holds an M.A. in Teaching English as a Second Language from the University of Illinois at Urbana-Champaign and a B.A. degree in Spanish and English from the Universidad Pedagógica Nacional in Colombia. Prior to joining ETS, Alexis was an associate professor in the Faculty of Education at Universidad de los Andes in Bogotá, Colombia, and an assessment developer at Second Language Testing Inc. in Rockville, Maryland.



# Examining the Use of Scenario-based Assessment to Measure the English Language Proficiency of Young Learners

Alexis A. Lopez  
Educational Testing Service

2020 Global English Teachers Association (GETA) Annual Conference  
December 16–19, 2020

## Overview of the Presentation

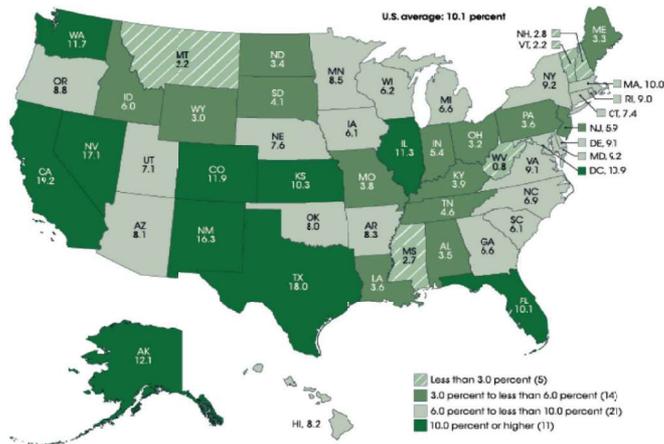
- Background information
- Scenario-based language assessment
- Project and study
- Sample scenario-based language tasks
- Lessons learned
- Implications for practice





## Background Information

### English Learners in the US



Source: National Center for Educational Statistics (NCES).

2000: 3.8 million (8.1 %) of ELs in K-12 schools

2017: 5 million (10.1 %) of ELs in K-12 schools

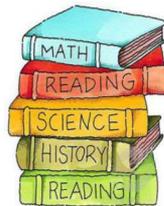
Growth of EL population projected to continue



## Background of EL in the US



## Needs of ELs in the U.S. Context



Whole-class support



Small group support



Individualized support



After school programs





# Assessment for English Learners

## Current Assessments Practices

### Initial ELP Assessment (Screeners)

- **Target test takers:** Incoming students; mostly kindergarteners and new students who first enroll in school
- **Uses:**
  - Identifying which students are English learners
  - Placing students
  - Determining which types of instructional supports are needed



## Current Assessments Practices

### Summative ELP Assessment

- Target test takers: EL students in grades K-12
- Uses:
  - Tracking annual progress of ELP attainment
  - Exiting students from EL status



## Main Challenges of Current ELP Assessments

How to assess target test takers

- Mostly young students (e.g., kindergarteners/ages 5-6) and new immigrant students

How to better measure the language construct

- Measuring students' communicative language abilities in school settings

How to provide more meaningful information

- Providing accurate and more fine-grained information about students' English language abilities





## Scenario-based Language Assessment

### Task-based Language Assessment

- Elicitation and evaluation of language use (across all modalities) for expressing and interpreting meaning, within a well-defined communicative context (and audience), for a clear purpose, toward a valued goal or outcome. (Norris, 2016, p. 232)

Elicitation and  
evaluation

Across all modalities

Clear purpose

Language use

Communicative  
context/audience

Goal or outcome



## Scenario-based Assessment

- Scenario-based assessment (SBA) is a fairly recent technology-based approach to assessment that addresses some of the limitations of traditional language assessment.
  - Tendency to measure discrete language skills
  - Difficulty measuring how people use language in real-world settings

Scenario-based assessment allows test takers to demonstrate their language proficiency competencies and processing abilities in a meaningful and goal-oriented context that simulates real world language use.



## SBA in General Educational Assessment

- SBA has recently been used in general educational assessment to measure disciplinary learning in math, English language arts and science (e.g., Bennett, 2010).
- SBA has also been used in L1 literacy contexts to measure reading comprehension and writing from different source materials (e.g., Sabatini & O'Reilly, 2013).



# Global Integrated Scenario-based Assessment (GISA)

**GISA Green Schools**

**Introduction**

Green schools provide effective learning environments while saving energy, natural resources, and money. Your school district wants to build a green school in your community.

Your class has decided to create a website about green schools to help members of the community become more familiar with the idea. The website will provide information to answer the following questions:

- What are green schools?
- How are green schools different from conventional schools?
- What are the pros and cons of green schools?

You will work with three classmates on the project: Brian, Diana, and Michael.

You will have **45 minutes** to complete the project. Click on the **Next** arrow to begin.

Clear purpose

Overall goal

Specific context



# Global Integrated Scenario-based Assessment (GISA)

**GISA Green Schools**

**What is a "Green School?"**

A green school is a kind of school that is specifically designed to save energy, natural resources, and money. Historically, the focus of school design was on creating a building that would provide a good learning experience for students. For example, in the past, designers wanted to make sure that there were enough classrooms and desks in a school. They wanted to provide ways for students to get to their classes efficiently. Designers of green schools also make sure that their schools have these basic features, but they go a step beyond. They make sure that the schools contribute to a healthy environment by using sustainable and energy-efficient materials.

**Green Schools and the Environment**

- **Sustainable Materials**  
Builders choose sustainable materials to build a green school. They use wood from trees that grow faster than they are harvested to help preserve endangered forests that have slow-growing trees.
- **Saving Energy and Water**  
In some green schools, renewable energy sources, like solar panels, are used to operate the school. These schools have solar panels on the roof that capture the sun's rays and convert them into electricity for the school. Using solar energy helps reduce the amount of oil and natural gas that the school buys.

Using less energy is important in green schools. Lights with motion sensors are a common feature. These "smart lights" remain off until someone enters a room. Windows and skylights are used to provide plenty of natural light. Conserving water is also important to green schools. Green schools use water-efficient fixtures, such as low-flush toilets and automatic faucets. Many building designs include rain water tanks that store water for landscaping and gardening. By reducing the amount of electricity and water used, green schools can lower their utility bills. According to some estimates, the average energy savings per green school is \$100,000 per year.

**Directions:** Read Brian's summary of the section, "What is a Green School?" below. Then, write a summary of the section "Green Schools and the Environment," which is highlighted on the left. Click on the **Next** arrow when you are done.

I wrote a summary of the section "What is a Green School!" to put on the website:

Green schools are schools that are designed to save on energy, resources, and money. Green schools have the basic features of all schools, like classrooms and desks, but the design focus is using environmentally-friendly materials.

Before we read the rest of the article, summarize the section "Green Schools and the Environment." I've highlighted the paragraphs that you should summarize.

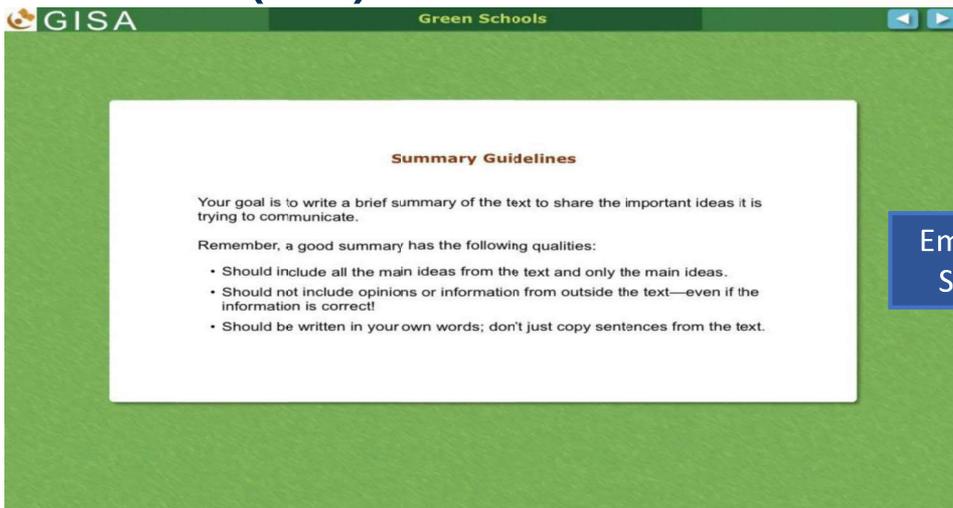
Type a 2-3 sentence summary of the section "Green Schools and the Environment" in the box below:

Integration of skills

Related set of activities



## Global Integrated Scenario-based Assessment (GISA)



The screenshot shows a web browser window with the title "GISA Green Schools". The main content area has a green background and a white box containing the following text:

**Summary Guidelines**

Your goal is to write a brief summary of the text to share the important ideas it is trying to communicate.

Remember, a good summary has the following qualities:

- Should include all the main ideas from the text and only the main ideas.
- Should not include opinions or information from outside the text—even if the information is correct!
- Should be written in your own words; don't just copy sentences from the text.

Embedded  
Support



## SBA in Language Assessment

- SBA has recently been used to assess EL students' L2 ability (Purpura, 2016; Wolf et al., 2016).
- SBA has shown great potential for:
  - measuring expanded language constructs
  - allowing test takers to demonstrate their language proficiency competencies in a meaningful and goal-oriented context that simulates real-life language use
  - providing opportunities for test takers to learn to use language communicatively



## SBA Distinctive Features

- Replicates real-world task situations in assessment tasks (e.g., retell a story)
- Contextualizes the assessment with a specific setting (e.g., school)
- Has an overarching goal (e.g., tell a student what the teacher said)
- Elicit learners' independent and integrated language skills (e.g., listening to a teacher talk about a topic in class and then discussing with other students)
- Includes some simulated characters (e.g., classmates, teachers)



## Real-world Tasks for Young Learners

- Simulate authentic contexts in academic settings



### Examples

- Read a story and discuss with partners
- Write a short story for the school newspaper
- Write an email to the principal about the school announcements
- Get a book about dinosaurs from the library
- Create a poster for a school party
- Participate in a debate to choose a class field trip





## Our Project

### Overall Goal of the Project

- The goal of this project was to improve assessment tasks for young English learners that would allow us to measure how they apply their language knowledge, skills, and abilities (KSAs) in meaningful academic communicative situations.



## Specific Goals for the Project

- Increase student engagement in assessment tasks.
- Improve the accuracy of measuring students' communicative language ability in school contexts.
- Make assessment-based interpretations that can be generalized to language use situations beyond the assessment itself.
- Provide useful information for teachers and students.

**One approach: Technology-enhanced scenario-based assessment tasks**



## Scenario-based Assessment Tasks for Young Learners

- Develop a series of related items/tasks within an enriched context.
- Give students more structure and guidance (e.g., clear purpose for completing the tasks).
- Allow students to engage multiple language skills to complete the tasks.
- Provide feedback and assistance for those who need it.
- Make the tasks more engaging for young learners.
  - Relatively brief
  - Content and topics likely to be familiar to young learners
  - Ample visual stimuli such as pictures, illustrations, videos or animations



## Main Research Areas

- Investigating how scenario-based assessment can be used to elicit more information about young learners' language knowledge, skills and abilities.
- Examining the use embedded supports to help students complete tasks in scenario-based assessment.
- Investigating how to use scenario-based assessment to enhance teaching.
- Examining the perceptions that teachers have of the scenarios and use of embedded scaffolding.



## Study Design

- Qualitative
  - One-on-one cognitive interviews with students
  - Focus group interviews with teachers
- Instruments
  - Various scenario-based tasks on iPads
  - Student observation and interview protocols
  - Student background questionnaire
  - Teacher focus group interview protocol



## Participants

Students in Grades K-5 (age: 5 – 11)

Grade	EL Students
K	28
1	15
2	6
3	5
4	6
5	5
Total	65

Grades K-5 ESL Teachers

Grade	Teachers
K	3
1	3
2	4
3	3
4	3
5	2
TOTAL	18



## Sample Scenario-based Tasks and Lessons Learned

## Overview of This Section

- We developed a series of scenario-based tasks:
  - Kindergarten: Mixing Paint
    - Eliciting more information from test-takers
  - Grades 3-5: Lemon Juice
    - Using supports (scaffolding) in SBA
  - Grades K-1: Reading Time
    - Enhancing teaching through the use of SBA
- Teachers' perceptions of scenarios and scaffolding
- Implications for SBA design and use



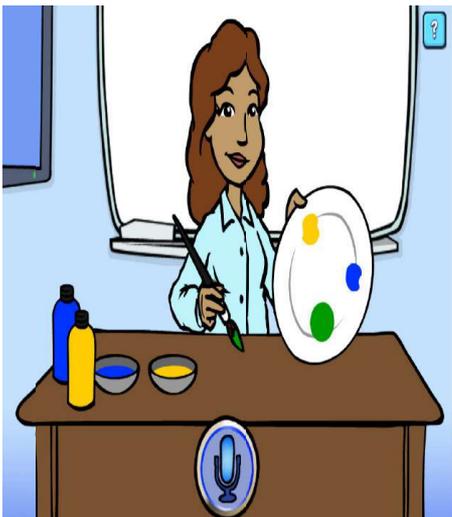
## School Day Scenario





## Mixing Paint

### Mixing Paint



- **Grade:** kindergarten
- **Context:** art class, teacher showing what happens when she mixes two colors together
- **Overall goal:** retell and describe what a teacher did in class
- **Integrated skills:** listening and speaking
- **Support:**
  - Guidelines
  - Illustrations
  - Step-by-step questions
  - Second retell

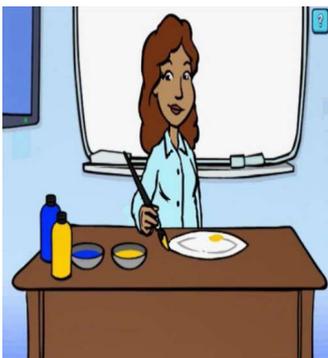


## First Retell

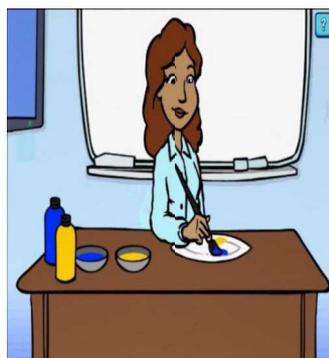
“Look at the pictures of what the teacher did in class today. Start with the first picture. Tell the class what the teacher did.”



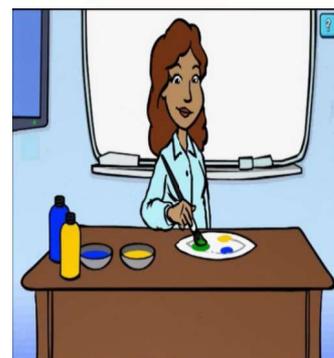
## Scaffolding Questions



“Watch carefully. What did the teacher just do?”



“Watch carefully. What did the teacher just do?”



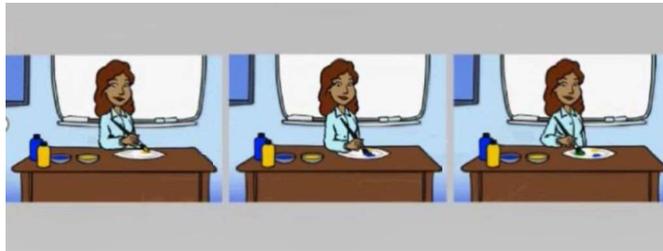
“Watch carefully. What did the teacher just do?”



## Second Retell



“Oh, I was late and missed class today. Can you tell me what the teacher did?”



**Eliciting More Information About Student’s Language Knowledge, Skills and Abilities**

## Mixing Paint

Prompt	Response
First retell: "Tell me everything the teacher did."	Oh, he was playing with <u>some colors</u> . And we <u>mix it up with green</u> . And that's it.



## Mixing Paint

Prompt	Response
First retell: "Tell me everything the teacher did."	Oh, he was playing with <u>some colors</u> . And we <u>mix it up with green</u> . And that's it.
Scaffolding questions: S1: "What did the teacher just do?"	S1: Pick...put... <u>yellow paint</u> on table.
S2: "What did the teacher just do?"	S2: Put the <u>blue on a plate</u> .
S3: "What did the teacher just do?"	S3: <u>Mix the two different colors and make green</u> .

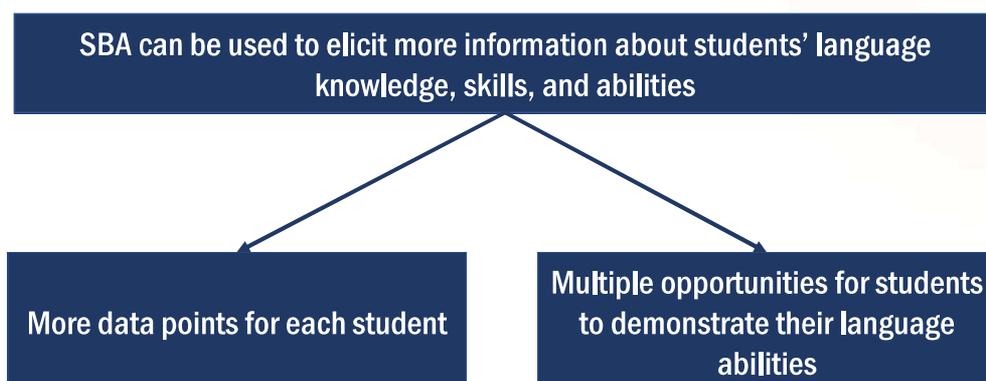


## Mixing Paint

Prompt	Response
First retell: “Tell me everything the teacher did.”	Oh, he was playing with some colors. And we mix it up with green. And that’s it.
Scaffolding questions: S1: “What did the teacher just do?” S2: “What did the teacher just do?” S3: “What did the teacher just do?”	S1: Pick...put... <u>yellow paint</u> on table. S2: Put the <u>blue</u> on a plate. S3: <u>Mix the two different colors and make green.</u>
Second retell: “I was late and missed class. Can you tell me what the teacher did?”	The teacher did the <u>yellow paint</u> . <u>Put it on a plate.</u> And <u>blue</u> put it on a plate. <u>And mix both colors and make green.</u> And that’s it.



## Summary



# Lemon Juice

## Lemon Juice



- Grades: 3-5
- Context: demonstration in a science classroom
- Overall goal: retell and describe what the teacher did
- Integrated skills: listening and speaking
- Support:
  - Labels
  - Step-by-step questions
  - Second retell
  - Keywords
  - Illustrations

## First Retell

“Listen and watch carefully. After I do the experiment, you will tell me about it.”

“Can you tell me about each step in the experiment? Look at the pictures of what the teacher did in class today. Start with the first picture. Tell the class what the teacher did?”



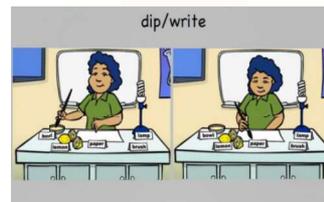
## Scaffolding Questions



“What do I need?”



“What do I do first?”



“What do I do next?”



“What happens next?”



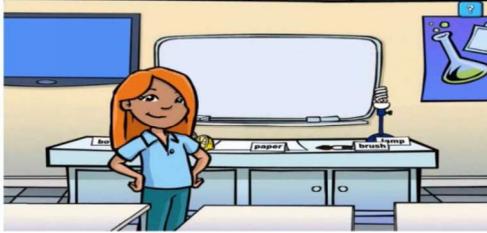
“What do I do then?”



“Then, what happens?”



## Second Retell



“Oh, I was late and missed class today. Can you tell me what the teacher did?”



**Using Supports (Scaffolding) to Help Students Complete the Task**

## Lemon Juice

Prompt	Response
First retell: "Tell me everything the teacher did."	With the brush, she used to make the, the writing on the paper.



## Retelling an Event

Prompt	Response
First retell: "Tell me everything the teacher did."	With the brush, she used to make the, the writing on the paper.
Scaffolding questions: S1: "What do I need?" S2: "What do I do first?" S3: "What do I do next?" S4: "What happens then?" S5: "What do I do then?" S6: "Then what happens?"	S1: <u>Bowl, lemon, paper, brush and lamp.</u> S2: <u>You squeeze the juice.</u> S3: <u>Dip, write.</u> S4: <u>Um, he waits for the paper to dry.</u> S5: <u>In front of the light.</u> S6: <u>Then in front of the light see what she wrote on the paper.</u>

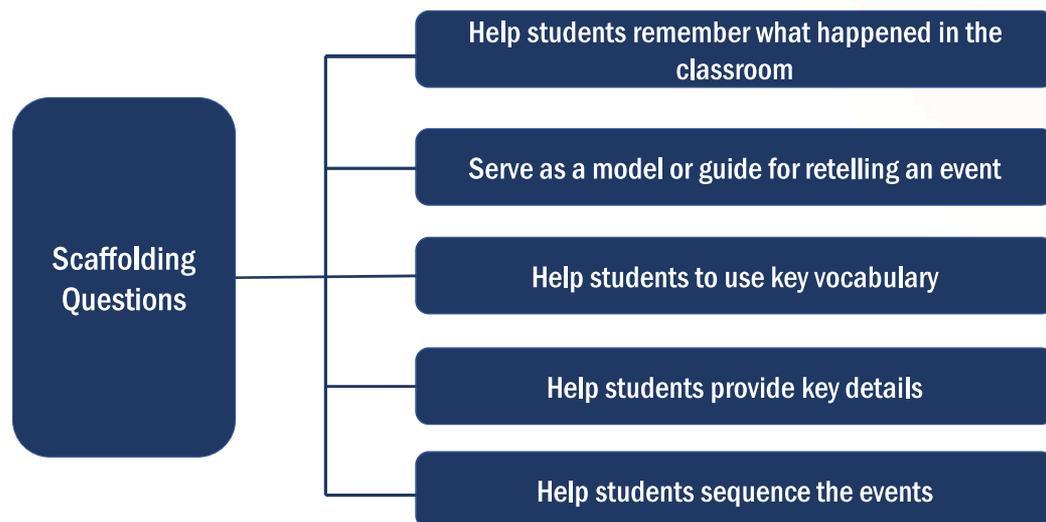


## Mixing Paint

Prompt	Response
First retell: "Tell me everything the teacher did."	<u>With the brush, she used to make the, the writing on the paper.</u>
Scaffolding questions: S1: "What do I need?" S2: "What do I do first?" S3: "What do I do next?" S4: "What happens then?" S5: "What do I do then?" S6: "Then what happens?"	S1: Bowl, lemon, paper, brush and lamp. S2: You squeeze the juice. S3: Dip, write. S4: Um, he waits for the paper to dry. S5: In front of the light. S6: Then in front of the light see what she wrote on the paper.
Second retell: "I was late and missed class. Can you tell me what the teacher did?"	<u>Squeeze the lemon in the bowl</u> and then she got, she picked the brush and <u>put it in the lemon juice</u> and then write in the paper <u>and then put on the light</u> and <u>it showed the, the word.</u>



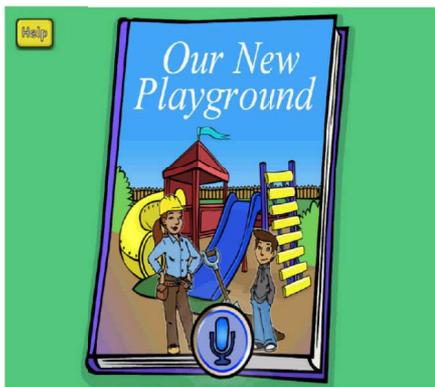
## Summary





## Reading Time

### Reading Time



- Grades: K-2
- Context: reading time in class
- Goal: retell as story that was read aloud.
- Integrated skills: listening and speaking
- Support:
  - Illustrations
  - Step-by-step questions



## Story Retell

1. A short story is read aloud with a series of still pictures
2. Students retell the story
3. Students answer a series of step-by-step questions



“Now, I want you to tell the story. Look at the four pictures from the story. Start with the first picture and tell me what happened in every picture.”



## Scaffolding Questions



“Look at the first picture. What do you see?”



“Look at the second picture. What is Luis doing?”



“Look at the third picture. What is Luis doing now?”



“Look at the fourth picture. What is happening here?”

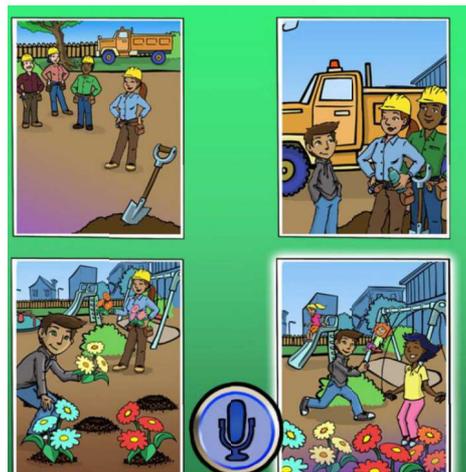




## Potential of SBA to Enhance Teaching

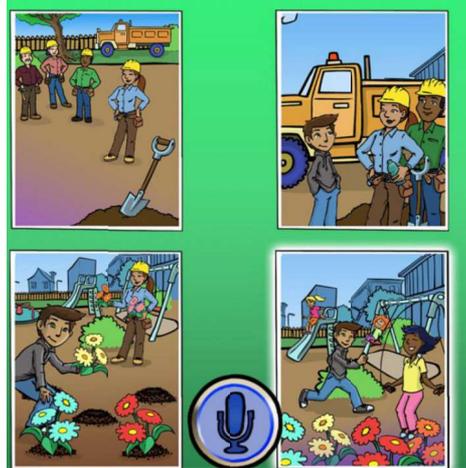
### Reading Time Retell

Prompt	Response
Retell	[No response]



## Scaffolding Question 1

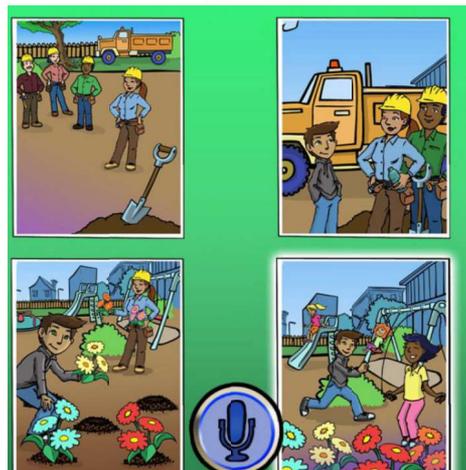
Prompt	Response
Retell	[No response]
SQ1: "Look at the first picture. What do you see?"	A truck.



ETS

## Scaffolding Question 2

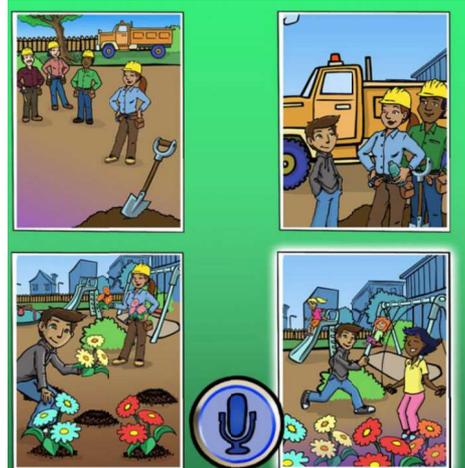
Prompt	Response
Retell	[No response]
S1: "Look at the first picture. What do you see?"	A truck.
S2: "Look at the second picture. What is Luis doing?"	Talking and a boy.



ETS

## Reading Time

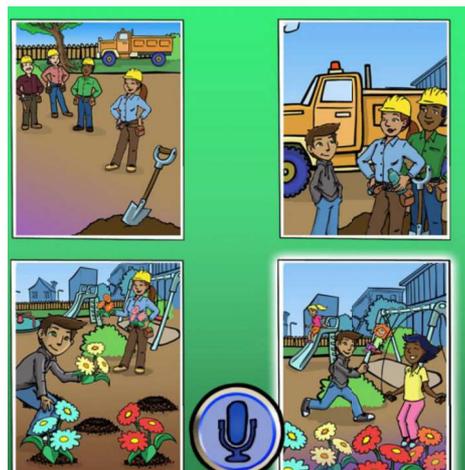
Prompt	Response
Retell	[No response]
S1: "Look at the first picture. What do you see?"	A truck.
S2: "Look at the second picture. What is Luis doing?"	Talking and a boy.
S3: "Look at the third picture. What is Luis doing now?"	Planting the flower.



ETS

## Reading Time

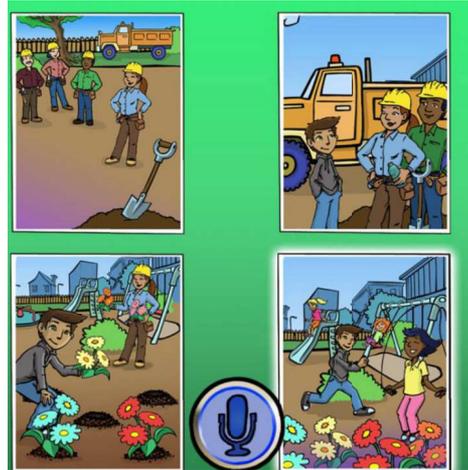
Prompt	Response
Retell	[No response]
S1: "Look at the first picture. What do you see?"	A truck.
S2: "Look at the second picture. What is Luis doing?"	Talking and a boy.
S3: "Look at the third picture. What is Luis doing now?"	Planting the flower.
S4: "Look at the fourth picture. What is happening here?"	Now they're playing.



ETS

## Reading Time

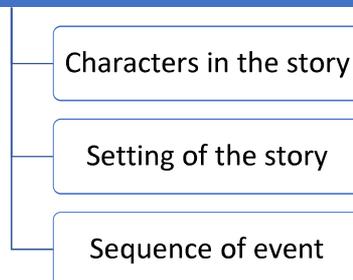
Prompt	Response
Retell	[No response]
S1: "Look at the first picture. What do you see?"	A truck.
S2: "Look at the second picture. What is Luis doing?"	Talking and a boy.
S3: "Look at the third picture. What is Luis doing now?"	Planting the flower.
S4: "Look at the fourth picture. What is happening here?"	Now they're playing.



## Summary

- To enhance learning, scenario-based assessment should be designed to elicit the kind of information needed to perform the specific task(s).

### Retelling a Story





## Teachers' Perceptions

### Scenarios

- The settings of the scenarios were engaging and relevant to their students' experiences in the classroom.
- The topic of the scenarios were familiar to the students; students can relate to these topics.
- The tasks in the scenarios were similar to the ones their students usually engage in class.
- The scenarios create a more authentic, meaningful, and purposeful context for their students to use their language skills.



## Scaffolding

- The scaffolding types are appropriate and similar to strategies they use in class.
  - E.g., breaking tasks into smaller steps (like in Mixing Paint and Lemon Juice)
- In general, teachers think that the scaffolding questions are very useful.
  - E.g., provide more information, give another opportunity to respond
- Suggested offering other types of support:
  - E.g., sentence starters, modeling responses



## Scaffolding

### Second Retell

A third grade teacher liked the part of the Lemon Juice scenario where a student arrives late to class and asks the test-taker for a summary of what she missed.

“This is an example of a more friendly way to assess the student’s oral language. This scenario would be less intimidating for my students.”  
(simulation of an interaction with another student)





## Implications

### Assessment Design

- Scenarios offer a great opportunity to develop thematically-related, meaningful and goal-oriented tasks within contexts that simulate how students use language in school.
- Important to sequence tasks in a way that provides young learners multiple opportunities to demonstrate what they know and can do in English.
- Task features should include the following:
  - Scaffolding
  - Feedback to teachers and students



## Assessment Use

- Provide relevant and timely feedback to students:
  - to promote and support future learning, so students can self-manage skills for learning
  - to allow them to engage with it and act upon it to become independent learners
- Provide relevant and timely feedback to teachers:
  - to understand the type of support their students need
  - to help their students monitor their progress towards meeting the intended learning goals



## Acknowledgements

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**Thank you!**

## **The Impact of Textual and Task Manipulation on L2 Learning from Reading**

Jookyung Jung  
(Chinese University of Hong Kong)

Textual modification techniques such as input enhancement and glossing have been widely researched in terms of their pedagogical capacity to facilitate second language (L2) learning from reading. It is generally accepted that they can trigger L2 readers' attention to target constructions during reading although it remains open to debate whether this attentional impact extends to learning of those constructions. Manipulation of reading tasks, on the other hand, has received very little attention in connection with L2 learning, even though learners are often required to perform various reading tasks in language classrooms. Against this background, this talk will report findings of three recent studies that addressed the combined effects of textual modification and task manipulation on L2 learning from reading. In this talk, I will highlight the need for more studies that explore how to promote L2 learning from reading within the task-based language teaching framework and emphasize task-relevance as an important factor that moderates the impact of textual modification.



**Jookyung Jung** is an Assistant Professor in the Department of English at the Chinese University of Hong Kong. Her research interests include interface between second language instruction and second language acquisition, with particular emphasis on task-based language teaching, second language reading and writing, and the role of individual difference. Her recent work has appeared in journals such as *Language Teaching Research*, *System*, and *Studies in Second Language Acquisition*.

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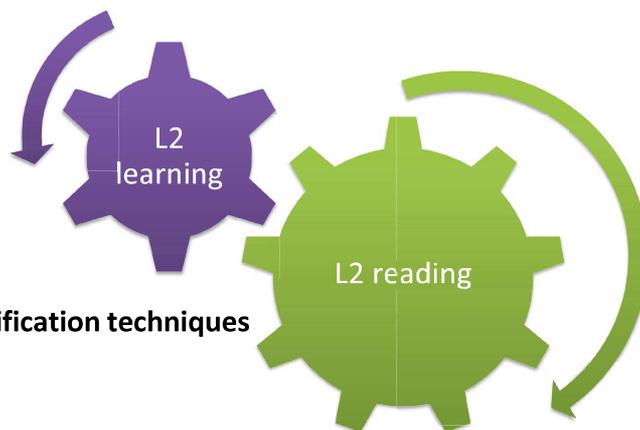
Webpage: [www.eng.cuhk.edu.hk/category/people/academic-staff\\_jung-jookyung.php](http://www.eng.cuhk.edu.hk/category/people/academic-staff_jung-jookyung.php)

# The impact of textual and task manipulation on L2 learning from reading

Jookyoung Jung



## L2 learning from L2 reading



- Textual modification techniques

## Textual modification techniques

Textual simplification

Glossing

Input enhancement

## Textual simplification

High frequency words  
Fewer idioms, fewer pronouns  
Simpler syntactic structures  
Reducing text length

Less processing burden  
Surplus attentional resources  
to L2 features

L2 learning from L2 reading  
(e.g., Long & Ross, 1997; Oh, 2001;  
Wong, 2003; Yano et al., 1994)  
→ comprehension ≠ acquisition

## Glossing

Providing meaning of unfamiliar words (usually in the text margin)

Easier comprehension  
Noticing of form-meaning connections of glossed words

Learning of the glossed words  
(e.g., Hulstijn & Laufer, 2001; Keating, 2008; Kim, 2008; Ko, 2012) → **Boosted effects when embedded in composition tasks**

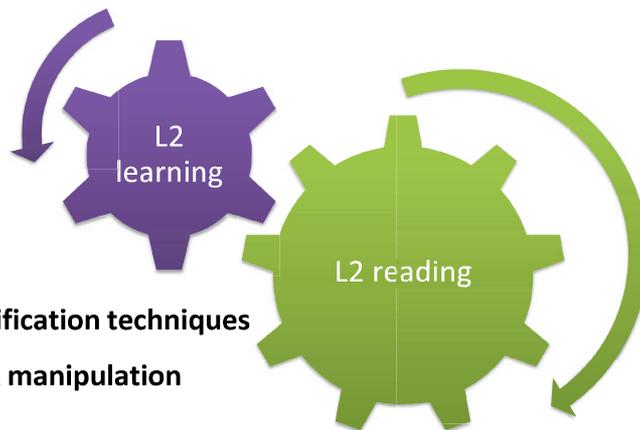
## Input enhancement

Typographical manipulation:  
Underlining, **colouring**, **bold-facing**, *italicizing*, **CAPTIALIZING**, **highlighting**, etc.

Steering learners' attention to target structure during reading

Learning of the enhanced structure  
(e.g., Doughty, 1991; Izumi, 2002; Leow et al., 2003; Williams, 1999)  
→ **Inconclusive**

## L2 learning from L2 reading



## Task manipulation

**Task:** A meaning-oriented activity that requires learners to use the target language in order to achieve a specified objective

**Little attention paid to input-based tasks (Shintani, 2012)**

**L1 eye-tracking studies on potential task effects on reading processes and learning**

- ➔ Reading goals change the way the text is processed (e.g., Radach et al., 2005)
- ➔ Task-relevant sentences are read more carefully and remembered better (e.g., Kaakinen & Hyöna, 2005)
- ➔ **Goal-focusing model of relevance** (McCrudden & Schraw, 2007): Pre-reading instruction set the criteria for determining relevance of textual information to the task goal, which in turn affects reading processes as well as learning from reading.

## Task instruction and L2 reading

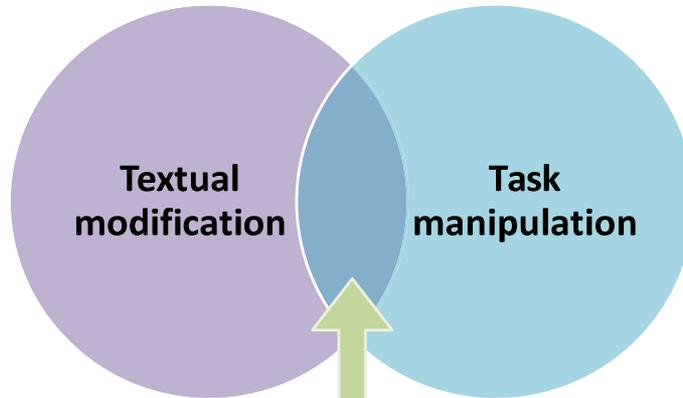
### L2 think-aloud studies on the impact of task goals on reading

- Task instruction affects reading behaviors and allocation of mental resources, which is manifested more clearly in reading processes rather than comprehension outcomes (e.g., Horiba, 2000, 2013)
- *Cognitive processing model for reading comprehension* (Khalifa & Weir, 2009): Depending on the reading goal, reader engage in different permutations of **careful** (slow, sequential, and incremental) and **expeditious** (quick, selective, and efficient) reading processes.

## Task manipulation

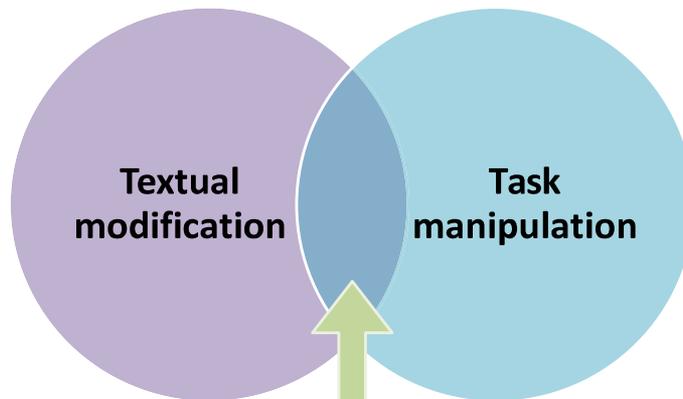


## Textual **AND** task manipulation



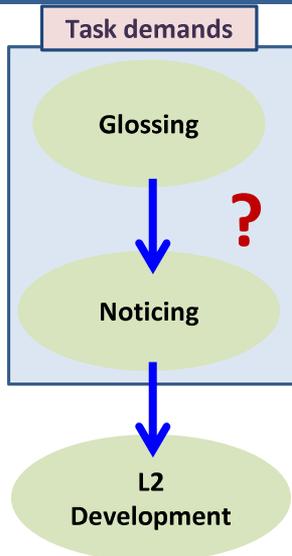
Task manipulation may change the way a text is processed, and thereby affect the efficacy of textual modification

## Textual **AND** task manipulation



- **Glossing: Jung, 2020; Jung & Révész, 2018**
- **Input enhancement: Lee & Jung, under review**

## Jung & Révész, 2018



- More complex task requiring more careful reading
- More attentive and intensive linguistic processing of text
- More attention to glosses and target constructions

## Jung & Révész, 2018

1. To what extent do the **cognitive demands of L2 reading tasks** affect **reading processes**, as reflected in participants' **eye-movements** and **stimulated recall** comments?
2. To what extent do the **cognitive demands of second language reading tasks** affect the **noticing of glossed linguistic constructions**, as reflected in participants' **eye-movements** and **stimulated recall** comments?

## Methodology: Design

Background questionnaire,  
Proficiency test, & Pretest  
(n = 38)

Reading 1  
& post-reading quest.  
(n = 38)

Reading 2  
& post-reading quest.  
(n = 38)

Stimulated recall protocols  
(n = 11)

Exit questionnaire  
(n = 38)

Eye-movements recorded with a  
Tobii X2-30 eyetracker

## Methodology: Participants

Background questionnaire,  
Proficiency test, & Pretest  
(n = 38)

Reading 1  
& post-reading quest.  
(n = 38)

Reading 2  
& post-reading quest.  
(n = 38)

Stimulated recall protocols  
(n = 11)

Exit questionnaire  
(n = 38)

### Participants:

- 38 L1 Korean speakers
- Mean age: 27.84 (*SD*: 4.52)
- CEFR C1

## Methodology: Texts

Background questionnaire,  
Proficiency test, & Pretest  
(n = 38)

Reading 1  
& post-reading quest.  
(n = 38)

Reading 2  
& post-reading quest.  
(n = 38)

Stimulated recall protocols  
(n = 11)

Exit questionnaire  
(n = 38)

### Text 1:

- Petroleum Resources
- 682 words
- Average readability index: 11.6

### Text 2:

- The Cambrian Period
- 699 words
- Average readability index: 13.4

## Methodology: Reading task and task complexity

Background questionnaire,  
Proficiency test, & Pretest  
(n = 38)

Reading 1  
& post-reading quest.  
(n = 38)

Reading 2  
& post-reading quest.  
(n = 38)

Stimulated recall protocols  
(n = 11)

Exit questionnaire  
(n = 38)

### Reading task:

- Ordering text segments while answering multiple-choice RC questions (n=9)

### Simple condition:

- Each paragraph split into two text segments

### Complex condition:

- Each paragraph split into three to four text segments

Complexity conditions and the texts counter-balanced, following a 2x2 repeated measures design

## Methodology: Task layout (complex version)

- [A] Gas pressure gradually diminishes, and oil is pumped from the well. Water or steam may be pumped down adjacent wells to help push the oil out.
- [B] Oil pools are valuable underground accumulations of oil, and oil fields are regions underlain by one or more oil pools. When an oil pool or field has been discovered, wells are drilled into the ground. Permanent towers, called derricks, used to be built to handle the long sections of drilling pipe.
- [C] At a refinery, the crude oil from underground is separated into natural gas, gasoline, kerosene, and various oils. Petrochemicals such as dyes, fertilizer, and plastic are also manufactured from the petroleum.
- [D] Now portable drilling machines are set up and are then dismantled and removed. When the well reaches a pool, oil usually rises up the well because of its density difference with water beneath it or because of the pressure of expanding gas trapped above it. Although this rise of oil is almost always carefully controlled today, gushers of oil, or gushers, were common in former times.
4. First, rearrange [A] to [D] and click them in the correct order.
5. Which of the following can be inferred from the above paragraph about "gushers"?
- They wasted more oil than they collected.
  - They made bringing the oil to the surface easier.
  - They signaled where to drill wells to reach an oil pool.
  - They frequently took place when a well reached an oil pool.

\* 줄어들다

\* 분출

Tobii X2-30 eye-tracking system

## Methodology: Target constructions

Background questionnaire,  
Proficiency test, & Pretest  
(n = 38)

Reading 1  
& post-reading quest.  
(n = 38)

Reading 2  
& post-reading quest.  
(n = 38)

Stimulated recall protocols  
(n = 11)

Exit questionnaire  
(n = 38)

### English unaccusative verbs:

- Unergative: Mary danced.
- Unaccusative: The snow melted.
- Persistent difficulty for L1 Korean learners
- 15 target unaccusative verbs

### Ten pseudowords:

- 10 lexical items, 5 from both texts
- Noun, frequency (1 time)
- English orthographic and morphological rules
- Seven letters and two syllables

Glossed with Korean translations in the margin of the texts

## Methodology: Pretest

Background questionnaire,  
Proficiency test, & Pretest  
(n = 38)

Reading 1  
& post-reading quest.  
(n = 38)

Reading 2  
& post-reading quest.  
(n = 38)

Stimulated recall protocols  
(n = 11)

Exit questionnaire  
(n = 38)

### Grammaticality judgment test (English unaccusativity):

- To test prior knowledge
- Untimed
- 15 grammatical and 15 ungrammatical target sentences
- 15 grammatical and 15 ungrammatical distractor sentences

## Methodology: Stimulated recall

Background questionnaire,  
Proficiency test, & Pretest  
(n = 38)

Reading 1  
& post-reading quest.  
(n = 38)

Reading 2  
& post-reading quest.  
(n = 38)

Stimulated recall protocols  
(n = 11)

Exit questionnaire  
(n = 38)

### Stimulated recall sessions:

- Prompted by the recorded eye-movements
- Instructed to stop the recordings and make comments:
- The researchers asked questions:  
e.g., *What made you...*  
*... read that part again?*  
*... refer to the gloss?*
- Sessions video-recorded

## Analysis: Eye-movement data

[A] Gas pressure gradually diminishes, and oil is pumped from the well. Water or steam may be pumped down adjacent wells to help push the oil out. 줄어들다

[B] Oil pools are valuable underground accumulations of oil, and oil fields are regions underlain by one or more oil pools. When an oil pool or field has been discovered, wells are drilled into the ground. Permanent towers, called derricks, used to be built to handle the long sections of drilling pipe.

[C] At a refinery, the crude oil from underground is separated into natural gas, gasoline, kerosene, and various oils. Petrochemicals such as dyes, fertilizer, and plastic are also manufactured from the petroleum.

[D] Now portable drilling machines are set up and are then dismantled and removed. When the well reaches a pool, oil usually rises up the well because of its density difference with water beneath it or because of the pressure of expanding gas trapped above it. Although this rise of oil is almost always carefully controlled today, gushers of oil, or gushers, were common in former times. 분출

4. First, rearrange [A] to [D] and click them in the correct order.
5. Which of the following can be inferred from the above paragraph about "gushers"?
  - (a) They wasted more oil than they collected.
  - (b) They made bringing the oil to the surface easier.
  - (c) They signaled where to drill wells to reach an oil pool.
  - (d) They frequently took place when a well reached an oil pool.

Text processing: Text only

## Analysis: Eye-movement data

[A] Gas pressure gradually diminishes, and oil is pumped from the well. Water or steam may be pumped down adjacent wells to help push the oil out. 줄어들다

[B] Oil pools are valuable underground accumulations of oil, and oil fields are regions underlain by one or more oil pools. When an oil pool or field has been discovered, wells are drilled into the ground. Permanent towers, called derricks, used to be built to handle the long sections of drilling pipe.

[C] At a refinery, the crude oil from underground is separated into natural gas, gasoline, kerosene, and various oils. Petrochemicals such as dyes, fertilizer, and plastic are also manufactured from the petroleum.

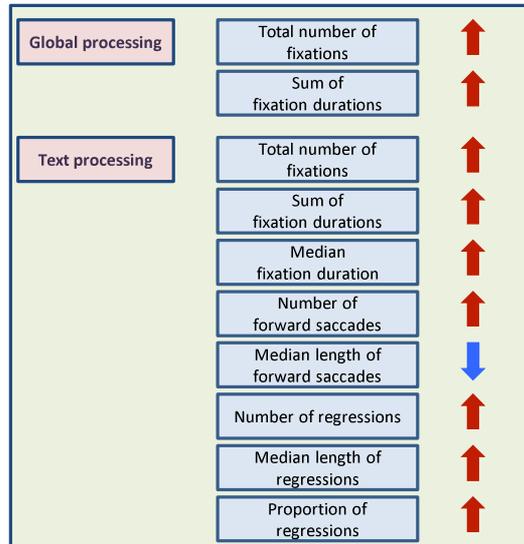
[D] Now portable drilling machines are set up and are then dismantled and removed. When the well reaches a pool, oil usually rises up the well because of its density difference with water beneath it or because of the pressure of expanding gas trapped above it. Although this rise of oil is almost always carefully controlled today, gushers of oil, or gushers, were common in former times. 분출

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  - (a) They wasted more oil than they collected.
  - (b) They made bringing the oil to the surface easier.
  - (c) They signaled where to drill wells to reach an oil pool.
  - (d) They frequently took place when a well reached an oil pool.

Global processing: Text & Response

## Hypotheses: Reading processes

When performing the complex versions,



## Analysis: Eye-movement data

- [A] Gas pressure gradually **diminishes**, and oil is pumped from the well. Water or steam may be pumped down adjacent wells to help push the oil out.
- [B] Oil pools are valuable underground accumulations of oil, and oil fields are regions underlain by one or more oil pools. When an oil pool or field has been discovered, wells are drilled into the ground. Permanent towers, called derricks, used to be built to handle the long sections of drilling pipe.
- [C] At a refinery, the crude oil from underground is separated into natural gas, gasoline, kerosene, and various oils. Petrochemicals such as dyes, fertilizer, and plastic are also manufactured from the petroleum.
- [D] Now portable drilling machines are set up and are then dismantled and removed. When the well reaches a pool, oil usually rises up the well because of its density difference with water beneath it or because of the pressure of expanding gas trapped above it. Although this rise of oil is almost always carefully controlled today, **gushers** of oil, or **gushers**, were common in former times.
4. First, rearrange [A] to [D] and click them in the correct order.
5. Which of the following can be inferred from the above paragraph about "gushers"?
- They wasted more oil than they collected.
  - They made bringing the oil to the surface easier.
  - They signaled where to drill wells to reach an oil pool.
  - They frequently took place when a well reached an oil pool.

Noticing of target verbs  
pseudowords

Noticing of glosses

## Hypotheses: Noticing

When performing the complex versions,

Noticing verbs	Total number of fixations	↑
	Sum of fixation durations	↑
Noticing verb glosses	Total number of fixations	↑
	Sum of fixation durations	↑
Noticing pseudowords	Total number of fixations	↑
	Sum of fixation durations	↑
Noticing pseudoword glosses	Total number of fixations	↑
	Sum of fixation durations	↑

## Result: Validation of task complexity

- **Post-reading questionnaire items**
  - Significantly greater for the complex versions
  
- **Time taken for task completion**
  - Significantly longer to complete the complex tasks than the simple ones.
  
- ➔ **Successful task complexity manipulation**

## Result: Eye-movement – reading processes

	Global processing					Text-reading				
	Number of fixations	Sum of fixation durations	Number of fixations	Sum of fixation duration	Median fixation duration	Number of forward saccades	Median length of forward saccades	Number of regressions	Median length of regressions	Proportion of regressions
<b>Simple</b>										
Text 1	2836.74	739.13	1570.84	426.50	221.11	1024.53	96.42	403.53	-164.50	0.28
Text 2	2893.58	775.73	1457.68	405.42	225.21	920.11	95.55	400.58	-163.37	0.30
<b>Complex</b>										
Text 1	3120.95	597.09	1894.21	500.29	216.53	1152.74	97.71	501.74	-154.58	0.30
Text 2	3487.79	861.94	2112.37	542.36	211.32	1317.32	96.05	536.26	-167.39	0.29
	.12		.17	.14		.21		.16		

### When performing complex versions..

- Significantly **greater number of eye-fixations** on both task as a whole and text part only.
- Significantly **longer fixation durations on text parts**.
- Significantly **greater frequency of forward and regressive eye-movements**
- ➔ **conscious and strategic effort to rehearse, consolidate, and remedy text memory**

## Result: Eye-movement – noticing

	Verb		Verb gloss		Pseudoword		Pseudoword gloss	
	Number of fixations	Sum of fixation durations	Number of fixations	Sum of fixation durations	Number of fixations	Sum of fixation durations	Number of fixations	Sum of fixation durations
<b>Simple</b>								
Text 1	30.68	7.94	3.42	0.89	18.58	4.97	2.26	0.49
Text 2	38.05	11.45	3.37	0.87	20.26	5.25	2.79	0.62
<b>Complex</b>								
Text 1	43.95	11.79	3.63	0.70	20.89	5.40	2.63	0.51
Text 2	57.26	15.51	3.58	0.82	19.11	4.89	2.32	0.57
	.34	.28						

- **Number of eye-fixations and sum of fixation-durations on the target verbs** were greater for **the complex versions**.

## Result: Stimulated recalls

**When performing complex tasks, participants reported more frequently..**

- experiencing difficulty
- feeling not confident
- using diverse reading strategies (e.g., careful reading, re-reading, etc.)
- depending on lexical cues (e.g., keywords, pronouns, transitional words, etc.)
- paying closer attention to sentence cohesion
- referring to the target unaccusative verbs

## Hypotheses check: Reading processes

**When performing the complex versions,**

Global processing	Total number of fixations	↑
	Sum of fixation durations	↑
Text processing	Total number of fixations	↑
	Sum of fixation durations	↑
	Median fixation duration	↑
	Number of forward saccades	↑
	Median length of forward saccades	↓
	Number of regressions	↑
	Median length of regressions	↑
	Proportion of regressions	↑

### **Stimulated recalls:**

- More frequent comments on utilising diverse reading strategies
- More extensive use of lexical and discourse cues

### **Insignificant influence of task complexity:**

→ Indices more susceptible to **task types** that trigger **qualitatively different reading processes**

## Hypotheses check: Noticing

When performing the complex versions,

Noticing verbs	Total number of fixations	↑
	Sum of fixation durations	↑
Noticing verb glosses	Total number of fixations	↑
	Sum of fixation durations	↑
Noticing pseudowords	Total number of fixations	↑
	Sum of fixation durations	↑
Noticing pseudoword glosses	Total number of fixations	↑
	Sum of fixation durations	↑

### **Stimulated recalls:**

More often commented on the target unaccusative verbs

### **Insignificant influence of task complexity:**

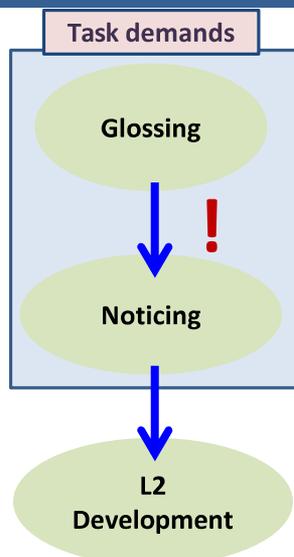
Verb glosses

→ Familiar with prototypical meanings of the verbs

Target pseudowords and their glosses

→ **Not essential** for successful task completion

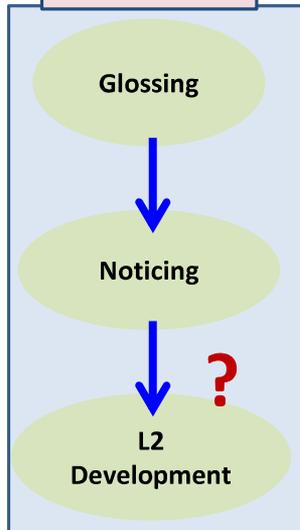
## Jung & Révész, 2018



- More complex reading task
  - more attentive and intensive text processing
  - More attention to the glossed verbs
- Task-relevance in sentence processing (Kaakinen & Hyöna, 2005)
- Goal-focusing model of relevance (McCrudden \* Schraw, 2007)

Jung, 2020

Task demands



- **More complex task** requiring more **attentive and intensive linguistic processing** of text
- **Greater amount of learning** of the **target constructions**

Jung, 2020

To what extent do **cognitive demands of reading tasks, glossing, and their interaction** affect **development in the target L2 grammatical and lexical knowledge**?

## Methodology: Design

Background questionnaire,  
Proficiency test, & Pretest  
(n = 88)

### Participants:

- 88 L1 Korean speakers
- 35 female, 53 male
- Mean age: 23.69 (*SD*: 3.67)
- CEFR C1

## Methodology: Design

Background questionnaire,  
Proficiency test, & Pretest  
(n = 88)

Reading glossed or  
unglossed texts  
& post-reading quest.

### Glossing:

- Target items glossed in the text margin
- L1 Korean translations

### Reading task:

#### Simple condition:

- Each paragraph split into two text segments

#### Complex condition:

- Each paragraph split into three to four text segments

## Methodology: Design

Background questionnaire,  
Proficiency test, & Pretest  
(n = 88)

Reading glossed or  
unglossed texts  
& post-reading quest.

Immediate posttest

### Grammaticality judgment test:

- 15 grammatical and 15 ungrammatical target sentences
- 15 grammatical and 15 ungrammatical distractor sentences

### Pseudoword recognition tests:

- 20 form recognition items  
(e.g., golands :  Yes  No)
- 20 meaning recognition items  
(e.g., golands : (1) 분출 (2) 후손 (3) 발견  
(4) 잘 모르겠다)

## Methodology: Design

Background questionnaire,  
Proficiency test, & Pretest  
(n = 88)

Reading glossed or  
unglossed texts  
& post-reading quest.

Immediate posttest

Delayed posttest

Exit questionnaire

1-week interval

## Results: learning of the verbs

### Descriptive statistics for reading comprehension scores

Group	N	Text 1			Text 2		
		Mean	SD	SE	Mean	SD	SE
[- C, - G]	22	5.82	2.04	.44	6.32	1.59	.34
[- C, + G]	22	6.36	1.43	.31	6.60	1.99	.43
[+ C, - G]	22	5.64	2.46	.53	5.73	1.86	.40
[+ C, + G]	22	5.96	2.17	.46	5.82	1.50	.32
Total	88	5.94	2.04	.22	6.11	1.75	.19

Note. Maximum score = 10

## Results: learning of the verbs

### Accuracy rates and mean gains for the GJT scores

Group	Test	N	Target verbs			Novel verbs		
			Mean	Mean gain	SD	Mean	Mean gain	SD
[- C, - G]	Pretest	22	48.8%		3.40	61.1%		1.88
	Immediate posttest	22	48.0%	-.23	4.68	58.8%	-.36	2.68
	Delayed posttest	22	51.4%	.77	4.96	60.8%	-.05	2.59
[- C, + G]	Pretest	22	52.9%		3.21	62.8%		2.21
	Immediate posttest	22	51.4%	1.14	4.77	67.1%	.68	2.90
	Delayed posttest	22	58.2%	1.59	5.59	70.2%	1.18	3.16
[+ C, - G]	Pretest	22	52.3%		3.14	66.2%		2.44
	Immediate posttest	22	59.7%	2.23	5.13	65.9%	-.05	3.02
	Delayed posttest	22	61.4%	2.73	5.50	73.3%	1.14	2.68
[+ C, + G]	Pretest	22	50.6%		3.40	63.4%		2.59
	Immediate posttest	22	60.3%	2.91	5.26	68.2%	.77	2.88
	Delayed posttest	22	57.9%	2.18	5.28	67.3%	.64	2.62

Note. Maximum score for: target GJT items = 30, novel GJT items = 16

## Results: learning of the pseudowords

### Descriptive statistics for vocabulary recognition scores

Group	Test	N	Form		Meaning	
			Mean	SD	Mean	SD
[- C, - G]	Immediate posttest	22	5.68	2.01	1.46	1.14
	Delayed posttest	22	5.86	2.57	1.32	1.21
[- C, + G]	Immediate posttest	22	4.68	2.10	2.05	1.53
	Delayed posttest	22	5.46	2.18	2.27	1.52
[+ C, - G]	Immediate posttest	22	5.50	2.02	1.50	1.68
	Delayed posttest	22	6.09	2.25	.96	1.00
[+ C, + G]	Immediate posttest	22	3.91	2.07	2.14	1.73
	Delayed posttest	22	5.14	2.23	1.64	1.29

Note. Maximum score for: form recognition = 10, meaning recognition = 10

## Results: learning of the pseudowords

### Descriptive statistics for vocabulary recognition scores

Group	Test	N	Form		Meaning	
			Mean	SD	Mean	SD
[- C, - G]	Immediate posttest	22	5.68	2.01	1.46	1.14
	Delayed posttest	22	5.86	2.57	1.32	1.21
[- C, + G]	Immediate posttest	22	4.68	2.10	2.05	1.53
	Delayed posttest	22	5.46	2.18	2.27	1.52
[+ C, - G]	Immediate posttest	22	5.50	2.02	1.50	1.68
	Delayed posttest	22	6.09	2.25	.96	1.00
[+ C, + G]	Immediate posttest	22	3.91	2.07	2.14	1.73
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## Results: learning of the pseudowords

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Note. Maximum score for: form recognition = 10, meaning recognition = 10

## Jung, 2020

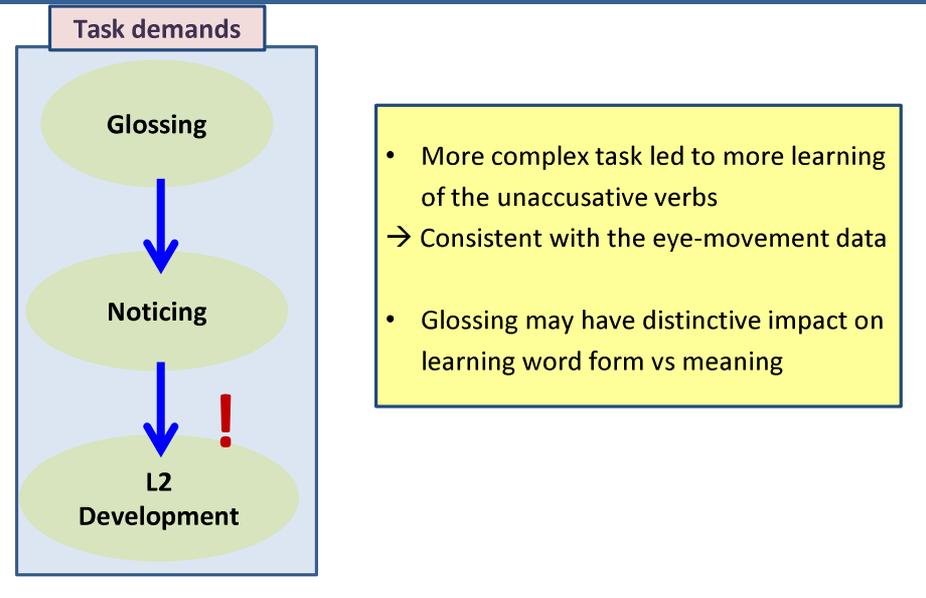
### Effects of task demands on learning of unaccusative verbs

- Significant effects of task complexity on immediate target gains  
→ closer inspection of the text, more exposure to the verbs
- No significant effects on delayed posttest, no transfer to the novel verbs  
→ learnability issue of unaccusative verbs; item-based learning

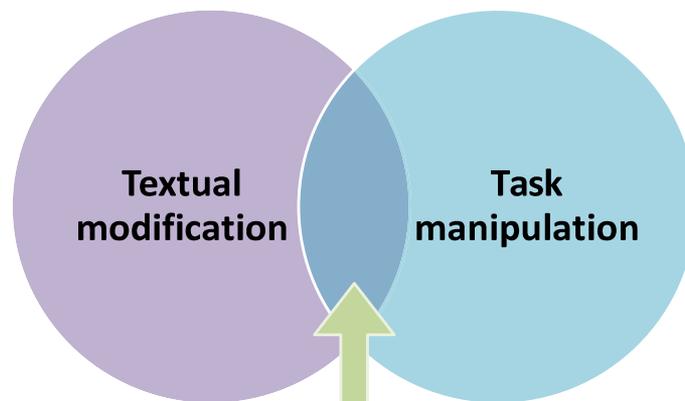
### Effects of glossing and task demands on learning of pseudo-words

- Negative effects of glossing on form recognition → no need to inspect the word forms to guess their meanings
- Positive effects of glossing & negative effects of task complexity on meaning recognition → deeper engagement needed for meaning recognition

## Jung, 2020

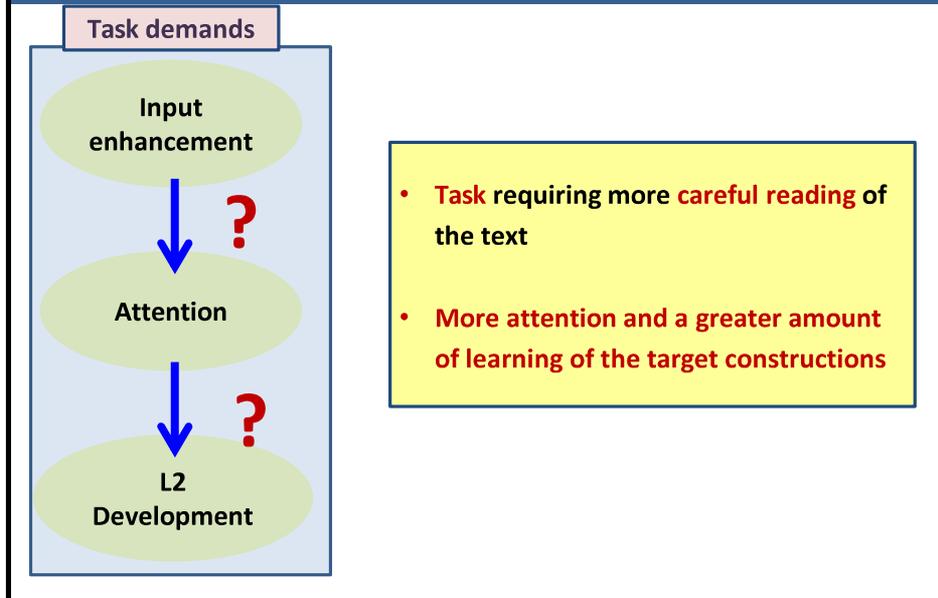


## Textual **AND** task manipulation



- **Glossing:** Jung, 2020; Jung & Révész, 2018
- **Input enhancement:** Lee & Jung, under review

## Lee & Jung, under review



## Research questions

1. To what extent do **task manipulation, textual enhancement, and their interaction** affect learners' **allocation of attentional resources** on the targeted linguistic construction as reflected in eye-movements?
2. To what extent do **task manipulation, textual enhancement and their interaction** affect **development in L2 grammatical knowledge**?
3. To what extent is learner **attention** allocated to the target linguistic construction relate to **development** in L2 grammatical knowledge?

## Methodology: Design

Background questionnaire,  
Proficiency test, & Pretest  
(n = 73)

### Participants:

- 73 L1 Korean speakers
- Mean age: 23.78 (SD: 3.85)
- TOEFL 98.27

### Target structure:

- English participle phrase in the restrictive use (e.g., Two students waiting outside look cold)

## Methodology: Design

Background questionnaire,  
Proficiency test, & Pretest  
(n = 73)

Reading enhanced or  
unenhanced texts  
& post-reading quest.

### Reading text:

- An opinion essay (851 words)
- Detrimental impact of various social media on teenagers' development
- 86.6% of the words within 2K word list

### Textual enhancement:

- Coloring participle phrases in red

### Reading task:

#### Careful condition:

- Reading to prepare for a presentation

#### Expeditious condition:

- Reading to figure out the gist

## Methodology: Design

Background questionnaire,  
Proficiency test, & Pretest  
(n = 73)

Reading enhanced or  
unenanced texts  
& post-reading quest.

Eye-movements recorded with a  
Tobii X-120 eyetracker

## Areas of interests

One main reason may lie in the nature of social media apps **designed** to show the highlights of other peoples' lives. When our "friends" share these experiences with us, we subconsciously suffer feelings of inadequacy, jealousy, and dissatisfaction with our own lives. Potentially more damaging, these social media platforms serve as vehicles for popularity contests. The more "likes" you get, the cooler you are.

Now sit back and try to imagine the impact on teenagers. They are already in an awkward and confusing period in their life, rife with feelings of insecurity, the need to fit in, and powerful hormonal changes. With social media, their feelings of self-worth and validation may depend entirely on how many "likes" they get, so it naturally follows that they feel compelled to incessantly check their phone to see how they are performing. For every "like" they get, their brains get hit with a spike of dopamine, further **reinforcing** their addictive tendency to check their phones in search of another dopamine hit.

Tobii X-120  
Noticing of target constructions

## Methodology: Design

Background questionnaire,  
Proficiency test, & Pretest  
(n = 73)

Reading enhanced or  
unenanced texts  
& post-reading quest.

Immediate posttest

### Grammaticality judgment test:

- 32 target items and 48 distractors
- Four test versions (A, B, C, and D), counter-balanced using a Latin Square design

## Methodology: Design

Background questionnaire,  
Proficiency test, & Pretest  
(n = 73)

Reading enhanced or  
unenanced text  
& post-reading quest.

Immediate posttest

Stimulated recall  
(n = 20)

Exit questionnaire

Eye-movements recorded with a  
Tobii X-120 eyetracker

Video-recorded

## Results

### Attention measures

	<i>N</i>	<i>M</i>	<i>SD</i>	95% CI	
				<i>Lower</i>	<i>Upper</i>
First fixation duration (sec)					
Enhanced + Expeditious	18	.22	.06	.19	.25
Enhanced + Careful	19	.21	.04	.18	.23
Unenhanced + Expeditious	18	.19	.04	.17	.21
Unenhanced + Careful	18	.21	.05	.19	.23
Total fixation duration (sec)					
Enhanced + Expeditious	18	.68	.29	.53	.83
Enhanced + Careful	19	1.17	.42	.97	1.37
Unenhanced + Expeditious	18	.55	.19	.46	.65
Unenhanced + Careful	18	.92	.42	.72	1.13
Fixation counts					
Enhanced + Expeditious	18	3.29	.92	2.82	3.73
Enhanced + Careful	19	5.78	2.00	4.81	6.74
Unenhanced + Expeditious	18	2.73	.72	2.37	3.09
Unenhanced + Careful	18	4.63	1.68	3.79	5.46

## Results

### Attention measures

	<i>N</i>	<i>M</i>	<i>SD</i>	95% CI	
				<i>Lower</i>	<i>Upper</i>
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Unenhanced + Expeditious	18	2.73	.72	2.37	3.09
Unenhanced + Careful	18	4.63	1.68	3.79	5.46

## Results

### GJT scores

	<i>M</i>	Mean Gain	<i>SD</i>	95% CI	
				<i>Lower</i>	<i>Upper</i>
Enhanced + Expeditious ( <i>N</i> = 18)					
Pretest	26.72	–	2.29	25.58	27.86
Posttest	27.28	.56	2.42	26.07	28.48
Enhanced + Careful ( <i>N</i> = 19)					
Pretest	26.74	–	2.80	25.38	28.09
Posttest	27.68	.94	2.89	26.29	29.08
Unenhanced + Expeditious ( <i>N</i> = 18)					
Pretest	26.28	–	3.86	24.36	28.20
Posttest	27.22	.94	4.30	25.08	29.38
Unenhanced + Careful ( <i>N</i> = 18)					
Pretest	26.22	–	2.92	24.77	27.67
Posttest	27.17	.95	3.96	25.20	29.13

Maximum value = 32.

## Results

### Correlations between attention measures and GJT gain scores

		Enhanced			Non-enhanced		
		First fixation duration	Total fixation duration	Fixation count	First fixation duration	Total fixation duration	Fixation count
Gains	$\rho$	.24	.24	.26	–.27	–.31	–.20
	<i>p</i>	.15	.14	.12	.11	.07	.24

		Careful reading			Non-enhanced		
		First fixation duration	Total fixation duration	Fixation count	First fixation duration	Total fixation duration	Fixation count
Gains	$\rho$	–.01	–.16	–.17	–.20	–.07	–.01
	<i>p</i>	.95	.34	.32	.90	.68	.96

## Results

### Stimulated recall comments

Code	Enhanced Expeditious	Enhanced Careful	Non- enhanced, Expeditious	Non- enhanced Careful	Example comments
Red- coloring	7	18	-	-	<i>I paid attention because they were highlighted in red.</i>
Unfamiliar word	4	9	-	2	<i>I didn't know the meaning of this word...</i>
No reason	-	6	-	3	<i>There was no specific reason .</i>
No memory	4	9	-	-	<i>I don't remember..</i>
Total	15	42	0	5	

## Results

### Stimulated recall comments

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## Results

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No reason	–	6	–	3	<i>There was no specific reason .</i>
No memory	4	9	–	–	<i>I don't remember.</i>
Total	15	42	0	5	

## Discussion

### Eye-movement data

#### Input enhancement as an attention-trigger device

- Effective to attract learners' attention to morphosyntactic features

#### Task manipulation to promote more attentive text processing

- More attention paid to the target constructions when reading to prepare for a presentation
- Participants were more likely to engage in more **intensive** and **recursive** reading processes to establish a highly coherent and accurate text representation

## Discussion

### Stimulated recall comments

Interestingly, participants often did not remember why they looked at the target constructions for noticeably long.

- **Eye-movement data** provides information on *lower-level and attentional processes*
- **Stimulated recalls** unveil *higher-level and meta-cognitive processes* under volitional control

## Discussion

### No impact of input enhancement on learning

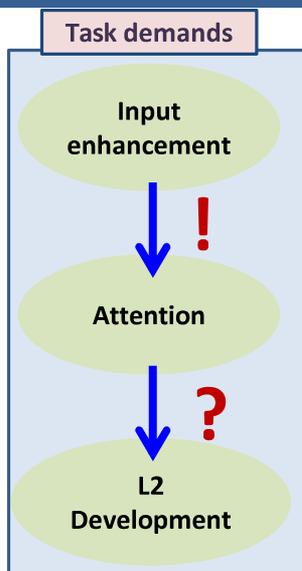
- Perceptual saliency of input did not result in promoting the development of the target structure
- Most comments in the stimulated recall indicated the participants noticed the target items, but none identified a particular use of them
- **L2 learning is attributable to a higher-level processing at the level of awareness rather than a lower-level attentional processes** (Leow et al., 2014)

## Discussion

### No impact of task manipulation on learning

- Provided scenarios – the sole reading purpose was to extract meaning propositions rather than paying attention to forms
- Even in the careful reading condition, more attention paid to meaning → short-circuited syntactic processing of the target constructions
- In Jung 2020 and Jung & Révész, 2018: Stronger need to for careful syntactic processing of each sentence → positive impact on L2 learning
- Task manipulation that encourages focus on both meaning and forms might have yielded somewhat different results

## Lee & Jung, under review



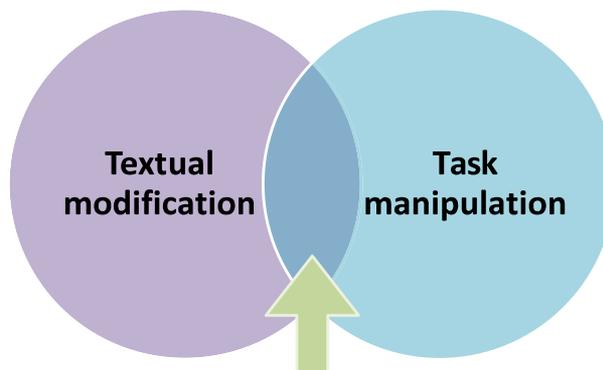
- Both input enhancement and task manipulation played as attention-trigger
- Not sufficient to extend the impact on learning
- Target features may have not been task-essential; The reading task was meaning-focused

## Conclusion

In sum,

- **Glossed** items are more likely to be noticed if they are **relevant to the goal of the reading task**.
- **Input enhancement** attracts L2 readers' attention, but it alone may have limited impact on L2 learning, and hence **need additional device** to boost its efficacy.
- **Task manipulation** can encourage L2 readers to make conscious and strategic effort to achieve the goal → **more attentive processing** of the task-relevant sentences

## Textual **AND** task manipulation



→ When there is a specific goal for reading that encourages more careful reading, and when the glossed/enhanced constructions are relevant to the task goal, more L2 learning may occur

→ **The importance of "task-relevance"**

## Conclusion

### Implications

- Task manipulation can alter the way L2 readers process and respond to task input → More research into task effects on learners' processes in input-based tasks
- The impact of textual modification can trigger attention but that may not be enough → More research into the impact of task-relevance to encourage deeper processing of the target constructions
- Real-time processes (eye-tracking measures) combined with stimulated recall comments → fuller and more nuanced understanding
- Pedagogical impact of task instruction on L2 learning from performing input-based tasks

Thank you very much!

## **The Effects of Repeated Reading on Reading Comprehension in Different Text Conditions**

Hyeok Jin Cheon  
(Chonnam National University)

The present study explored the effects of repeated reading on reading comprehension and learners' perceived difficulty in different text conditions. One hundred eighty-three Korean high school students participated in the study and were assigned to two groups, the one using modified texts in class (Modified) and the other using original texts in class (Original). The learners' reading comprehension, consisting of three types such as general, specific, and inferential, was measured through pre-, post-, and delayed tests. Their perceptions on text difficulty were checked with a seven-point Likert scale. The results showed that there was no immediate effect of text conditions on reading comprehension; little difference was shown between the groups. Delayed effects, however, were found in both groups, in terms of general and inferential. The results imply that regardless of text conditions, the repetition or familiarity of the conditions could contribute substantially to improvements in general and inferential comprehension. It was also found that depending on proficiency levels, the effects of text conditions on reading comprehension were differently shown. High level learners (HLL) of the Modified group showed significant improvements in general, while HLL of the Original group showed a significant drop in specific. Both Intermediate and low level learners (ILL & LLL) of the Modified group displayed significant difference in general and inferential, while ILL and LLL of the Original group showed significant difference in inferential and general, respectively. Thus, it could be inferred that instruction with modified texts is generally more beneficial to all the levels of the students than one with original texts. In perceived text difficulty, the higher proficiency levels, the easier the learners felt the texts, and the Modified group found the reading texts significantly easier than the Original group.

**Hyeok Jin Cheon** is a teacher of Chonnam National University High School and an instructor of the Department of English Education at Chonnam National University. His research articles have appeared in various journals, including *International Journal of Lexicography*, *English Teaching*, *Korean Journal of Applied Linguistics*, and

*English Language & Literature Teaching*. His research interests are L2 development in four skills and vocabulary acquisition.

# The Effects of Repeated Reading on Reading Comprehension in Different Text Conditions

Hyeok Jin Cheon

(Chonnam National University)

30 November, 2020

## Necessities and originality for the study

- Researchers have separately addressed the effects of text type (authentic vs. modified) and repeated reading (RR).
- Students' English reading proficiency levels are included as variables.
- Reading comprehension consists of three components: general, specific, and inferential.
- Reading text conditions for the study

No.	Group	Description
1	Modified	Repeated reading activity with texts in the textbook
2	Original	Repeated reading activity with original texts online

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## Introduction

- Students' performance in reading can be different according to the type of reading texts given.
- Authentic & modified texts

### Previous studies

- Extensive discussion on the merits of authentic and modified texts on reading comprehension of L2 learners (Berardo, 2006; Crossley, Yang, & McNamara, 2014; Gilmore, 2007; Guariento & Morley, 2001; Nation & Deweerd, 2001; Widdowson, 1998)
- The effects of text type on reading comprehension (Abdallah, 2005; Albiladi, 2019; Gilmore, 2011; Jooyandeh, 2017; Jon, 2020; Kim, 2015; O'Donnell, 2009; Oh, 2001; Rama, 2020; Sacha, 2006; Taghavi & Aladimi, 2018; Yano, Long & Ross, 1994; Young, 1993, 1999)

## Purpose of the study

- To explore the impact of repeated reading on reading comprehension in different text conditions
  - immediate or delayed
  - learners' reading proficiency levels (high, intermediate & low)
- To examine a relationship between text type and L2 learners' perceived text difficulty

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## Research Questions

1. What are **the immediate effects** of text conditions (modified vs. original) in repeated reading on L2 reading comprehension?
2. What are **the delayed effects** of text conditions (modified vs. original) in repeated reading on L2 reading comprehension?
3. What are the effects of text conditions (modified vs. original) in repeated reading on reading comprehension, **according to proficiency levels**?
4. How do L2 learners **perceive text difficulty** according to text conditions?

## Participants

- Initial No. of Students: 198
- **Fifteen** failed to take more than one session of instruction or delayed test
- Finally, **183** students participated
- **Participants**
  - 1<sup>st</sup> grade high school students
  - studied English for about eight years
  - the same mother tongue

Group	N	Male	Female
Modified	90	45 (50.0%)	45 (50.0%)
Original	93	46 (49.5%)	47 (50.5%)
Total	183	91 (50.3%)	92 (49.7%)

## Participants

Group	N	Level		
		High	Intermediate	Low
Modified	90	27 (30.0%)	42 (46.7%)	21 (23.3%)
Original	93	26 (28.0%)	42 (45.2%)	25 (26.8%)
Total	183	53 (29.0%)	84 (45.9%)	46 (25.1%)

- Criteria for Level: **mean and standard deviation** of the pretest (Max. = 15, M = 10.03, SD = 3.335)
- High: 13 -15
- Intermediate: 7-12
- Low: 2-6

## Reading Materials Selection

- Modified Text
- From the textbook published by NE 능력
  - Lesson 1 Read
  - The Final Touchdown



## Original Text

- <http://www.huffingtonpost.com>

## Text analysis

- Flesch-Kincaid Grade (FKG) Level
- Text readability results from Web VP Classic

Text	Token	Word family	Type	IK and 2K words	FKG level
Modified	1	118+?	152	250 (88.65%)	5.7
	2	153+?	195	332 (89.48%)	7
Original	1	161+?	200	332 (89.24%)	9.9
	2	164+?	218	339 (86.04%)	10.6

## The Flesch-Kincaid Grade (FKG) Level

- The **Flesch–Kincaid readability tests** are readability tests designed to indicate how difficult a reading passage in English is to understand.
- 1) the **Flesch reading ease**
- 2) the **Flesch–Kincaid grade level**.
- These readability tests are used extensively in the field of education. The "Flesch–Kincaid Grade Level Formula" presents a **score as a US grade level**, making it easier for teachers, parents, librarians, and others to judge the readability level of various books and texts.

## Instruments

1. **Pretest & Delayed test**
  - fifteen multiple-choice reading comprehension (RC) questions
  - extracted from 2017 and 2018 High School Entrance Exams each
  - three types of questions used: general, specific, and inferential
2. **Posttests**
  - two posttests
  - fifteen multiple-choice RC questions
  - three types of questions used: general, specific, and inferential
  - In total, two texts & 30 RC questions
  - Reviewed by two Korean teachers of English & one native English-speaking teacher
  - Cronbach  $\alpha$  coefficients: .843 & .817

## Procedures

Procedures	Description details
Group assignment	8 intact classes Divided into two groups: Modified & Original
Pretest (RC)	2017 High School Entrance Exam / 15 RC questions (5 for G, S, & I each) / for 30 mins.
Treatment	<ul style="list-style-type: none"> <li>- After one week from the pretest</li> <li>- <b>Two sessions</b> for one week</li> <li>- Proceeded with the repeated reading activity <b>paragraph by paragraph</b></li> <li>- 15 RC for each session (5 for G, S, &amp; I each)</li> <li>- <b>Read one paragraph four times</b> → Solve RC questions related ... (repeat) → Perception – check on text difficulty (7-point Likert Scale)</li> </ul>
Delayed test (RC)	2018 High School Entrance Exam / 15 RC questions (5 for G, S, & I each) / for 30 mins.

## Data Analysis

- The SPSS 20.0 program was run.
- The significance level was set at .05, nondirectional.
- To calculate the reliability of the posttest, Chronbach's alpha was computed.
- Independent *t*-test for pretests  
→ **homogeneity of two groups**
- Two-way repeated-measures MANOVA for the two RC posttests scores + LSD post hoc test → **immediate effects**
- A paired-samples *t*-test between pretests and delayed tests in each group → **delayed effects**
- A paired-samples *t*-test between pretests and delayed tests in each group **by level** (high, intermediate and low)
- Two-way ANOVA for learners' perceived text difficulty

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## Results

- **Results of Group Comparison on Pretest (max.=15)**

Type	Group	N	M	SD	t	Sig.	$\eta^2$
General	Modified	90	3.23	1.237	-1.492	.138	.012
	Original	93	3.51	1.230			
Specific	Modified	90	3.83	1.183	.573	.567	.002
	Original	93	3.73	1.226			
Inferential	Modified	90	2.87	1.515	-.118	.906	.000
	Original	93	2.89	1.441			
Total	Modified	90	9.93	3.297	-.396	.693	.001
	Original	93	10.13	3.385			

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## Results

1. **Immediate Effects** of Text Conditions in RR on RC (appendix 1)
- Descriptive Statistics for Posttests
  - **Repeated-measures MANOVA** Results for Reading Comprehension

Source	SS	df	MS	F	Sig.	Partial $\eta^2$
Posttest	12.238	1	12.238	4.632	.033*	.025
Posttest*Group	0.042	1	.042	.016	.900	.000
Group	.200	1	.200	.011	.981	.000

- Significant effect of text conditions in RR **over time**
- No difference between groups

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## Results

- 2-1. **Delayed Effects** of Text Conditions in RR on RC

### Results of Comparison on Pretest and Delayed Test by Group

Group	Test	N	M	SD	t	Sig.	$\eta^2$
Modified	Pre	90	9.93	3.297	-5.599	.000*	.150
	Delayed						
Original	Pre	93	10.13	3.385	-2.808	.006*	.041
	Delayed						

- Significant difference between pre- and delayed RC scores in both groups

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## Results

### 2-2. Delayed Effects of Text Conditions in RR on RC

#### Results of Comparison on Pretest and Delayed Test of the Modified Group

Type	Test	N	M	SD	t	Sig.	$\eta^2$
General	Pre	90	3.23	1.237	-5.872	.000*	.162
	Delayed		3.99	1.055			
Specific	Pre	90	3.83	1.183	-7.75	.440	.003
	Delayed		3.92	1.154			
Inferential	Pre	90	2.87	1.515	-3.408	.001*	.061
	Delayed		3.31	1.511			
Total	Pre	90	9.93	3.297	-5.599	.000*	.150
	Delayed		11.22	3.158			

- Significant results in general and inferential in the Modified group

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## Results

### 2-3. Delayed Effects of Text Conditions in RR on RC

#### Results of Comparison on Pretest and Delayed Test of the Original Group

Type	Test	N	M	SD	t	Sig.	$\eta^2$
General	Pre	93	3.51	1.230	-2.771	.007*	.040
	Delayed		3.88	1.141			
Specific	Pre	93	3.73	1.226	.581	.563	.002
	Delayed		6.37	1.254			
Inferential	Pre	93	2.89	1.441	-2.434	.017*	.031
	Delayed		3.24	1.658			
Total	Pre	93	10.13	3.385	-2.808	.006*	.041
	Delayed		10.78	3.355			

- Significant results in general and inferential in the Original group

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## Results

### 3-1. Delayed Effects of Text Conditions in RR on RC by Level

#### Results of Comparison on Pretest and Delayed Test of the HL Modified Group

Type	Test	N	M	SD	t	Sig.	$\eta^2$
General	Pre	27	4.33	.679	-3.075	.005*	.154
	Delayed		4.78	.506			
Specific	Pre	27	4.89	.320	1.442	.161	.038
	Delayed		4.67	.679			
Inferential	Pre	27	4.48	.580	-.328	.746	.002
	Delayed		4.56	1.050			
Total	Pre	27	13.70	.775	-1.017	.319	.020
	Delayed		14.00	1.544			

- Significant difference in **general** in the HL Modified Group

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## Results

### 3-2. Delayed Effects of Text Conditions in RR on RC by Level

#### Results of Comparison on Pretest and Delayed Test of the HL Original Group

Type	Test	N	M	SD	t	Sig.	$\eta^2$
General	Pre	26	4.58	.504	-.493	.627	.005
	Delayed		4.65	.562			
Specific	Pre	26	4.88	.326	2.273	.032*	.094
	Delayed		4.62	.571			
Inferential	Pre	26	4.42	.578	.000	1.000	.000
	Delayed		4.42	.902			
Total	Pre	26	13.88	.766	.926	.363	.017
	Delayed		13.69	1.087			

- Significant difference in **specific** in the HL Original Group

## Results

3-3. Delayed Effects of Text Conditions in RR on RC by Level

Results of Comparison on Pretest and Delayed Test of the **IL Modified Group**

Type	Test	N	M	SD	t	Sig.	$\eta^2$
General	Pre	42	3.21	.951	-3.789	.000*	.149
	Delayed		3.98	.897			
Specific	Pre	42	3.90	.790	-.741	.463	.007
	Delayed		4.02	.811			
Inferential	Pre	42	2.74	1.014	-3.161	.003*	.109
	Delayed		3.31	1.137			
Total	Pre	42	9.86	1.389	-4.729	.000*	.214
	Delayed		11.31	2.147			

- Significant differences in **general** and **inferential** in the IL Modified Group

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## Results

3-4. Delayed Effects of Text Conditions in RR on RC by Level

Results of Comparison on Pretest and Delayed Test of the **IL Original Group**

Type	Test	N	M	SD	t	Sig.	$\eta^2$
General	Pre	42	3.74	.885	-.892	.377	.010
	Delayed		3.93	.997			
Specific	Pre	42	3.95	.697	1.242	.221	.018
	Delayed		3.76	1.008			
Inferential	Pre	42	2.86	1.002	-3.109	.003*	.105
	Delayed		3.50	1.384			
Total	Pre	42	10.55	1.435	-1.879	.067	.041
	Delayed		11.19	2.442			

- Significant difference in **inferential** in the IL Original Group

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## Results

3-5. Delayed Effects of Text Conditions in RR on RC by Level

Results of Comparison on Pretest and Delayed Test of the **LL Modified Group**

Type	Test	N	M	SD	t	Sig.	$\eta^2$
General	Pre	21	1.86	.854	-3.590	.002*	.244
	Delayed		3.00	1.049			
Specific	Pre	21	2.33	.966	-1.404	.176	.047
	Delayed		2.76	1.338			
Inferential	Pre	21	1.05	.805	-2.197	.040*	.108
	Delayed		1.71	1.146			
Total	Pre	21	5.24	1.136	-3.675	.002*	.252
	Delayed		7.48	2.581			

- Significant differences in **general** and **inferential** in the LL Modified Group

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## Results

3-6. Delayed Effects of Text Conditions in RR on RC by Level

Results of Comparison on Pretest and Delayed Test of the **LL Original Group**

Type	Test	N	M	SD	t	Sig.	$\eta^2$
General	Pre	25	2.00	.707	-3.464	.002*	.200
	Delayed		3.00	1.225			
Specific	Pre	25	2.16	.850	-1.250	.223	.032
	Delayed		2.52	1.262			
Inferential	Pre	25	1.36	.952	-.622	.540	.008
	Delayed		1.56	1.356			
Total	Pre	25	5.52	1.447	-2.715	.012*	.133
	Delayed		7.08	2.827			

- Significant differences in **general** in the LL Original Group

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## Results

### 4. A Relationship btw Text Conditions in RR and Perceived Text Difficulty

- Descriptive Statistics for Posttests (appendix 2)

#### Results of Group Comparisons on Perceived Text Difficulty

Source	Type III SS	df	MS	F	Sig.	Partial $\eta^2$	Observed Power
Level	179.170	2	89.585	60.881	.000*	.253	1.000
Group	12.571	1	12.571	8.543	.004*	.023	.830
Level*Group	3.139	2	1.569	1.067	.345	.006	.237
Error	529.733	360	1.471				

- Seven-point Likert scale used
- Significant difference btw levels and btw groups respectively
- Post hoc results; significantly different among all levels

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## Major Findings & Discussion

### Immediate Effect

- No significant difference in RC posttest scores between the two groups by repeated-measures MANOVA  
→ No immediate effect of text conditions in RR on RC
- Significant difference in RC posttest scores over time  
→ Sig. immediate time effect  
→ 1) Both text conditions, regardless of text type, have an immediate effect on RC  
2) Practice effect; familiarity of tasks

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## Major Findings & Discussion

### Delayed Effect

- Results of comparing pretest and delayed test of each group by paired samples *t*-test  
→ Sig. delayed effects on RC, especially in general and inferential

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## Major Findings & Discussion

### Delayed Effect

- Analyzed by RC proficiency levels
- In the Modified group,
  - HLL showed significant improvements in 'general'
  - Both ILL & LLL displayed significant difference in 'general' and 'inferential'
- Students of all the levels were found to be significantly beneficial to the 'general' item type in RC; those at both intermediate and low levels were significantly effective in 'inferential' as well.

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## Major Findings & Discussion

### Delayed Effect

- Analyzed by RC proficiency levels
  - In the Original group,
    - HLL showed a **significant drop** in 'specific'
    - ILL & LLL displayed significant improvements in 'inferential' and 'general' respectively
- Instruction with **modified** texts is generally more beneficial to **all the levels** of the students than one with original texts.
- Especially, **ILL & LLL** could have more benefits than **HLL**.
- In the case of 'specific,' **little or negative** (HLL of Original) impacts could be seen.

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## Major Findings & Discussion

### Perceptions on reading text difficulty

- Significant differences were shown between high and intermediate levels, intermediate and low, and high and low.
  - The Likert scale mean score of the **modified group** was significantly lower than that of the **original group**.
- **Generally, with regard to text type, modified texts would be more appropriate to L2 learners.**

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## Final Remarks

- RR, regardless of text type, has **positive immediate time effects**.
  - RR, regardless of text type, has **positive delayed effects** on RC, not in specific, but in **general and inferential**.
  - In RR activity, **modified texts** could generally be more beneficial to **all the levels of EFL learners** than original texts.
  - Especially, **ILL & LLL** could have more benefits by using modified texts than original texts.
- **For Future Studies**
- Apply to other skills
  - Add another experimental group: elaboration
  - Longer treatment period

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## The Effects of Repeated Reading on Reading Comprehension in Different Text Conditions

# Thank you!

## Appendix

1. Immediate Effects of Text Conditions on Reading Comprehension

Descriptive Statistics for (Max. = 15)

Type	Group	Posttest 1		Posttest 2		Total		
		N	M	SD	M	SD	M	SD
General	Modified	90	2.93	1.288	3.37	1.449	3.15	1.384
	Original	93	3.04	1.406	3.40	1.368	3.22	1.395
Specific	Modified	90	4.02	1.382	3.47	1.400	3.74	1.415
	Original	93	3.66	1.068	3.42	1.370	3.54	1.230
Inferential	Modified	90	3.16	1.357	3.62	1.232	3.39	1.313
	Original	93	3.34	1.273	3.61	1.344	3.48	1.312
Total	Modified	90	10.11	3.114	10.46	3.455		
	Original	93	10.04	3.127	10.43	3.462		
	Total	183	10.08	3.112	10.44	3.449		

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## Results & Discussion

2. A Relationship btw Text Conditions in RR and Perceived Text Difficulty

Descriptive Statistics for Perceived Text Difficulty

Level	Group	N	M	SD
High	Modified	54	3.01	1.200
	Original	52	3.66	1.300
	Total	106	3.33	1.285
Intermediate	Modified	84	4.34	1.231
	Original	84	4.71	1.162
	Total	168	4.53	1.208
Low	Modified	42	5.12	1.247
	Original	50	5.26	1.157
	Total	92	5.20	1.194
Total	Modified	180	4.16	1.454
	Original	186	4.54	1.341
	Total	366	4.35	1.413

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## **Addressing Cognitive Differences in the Memorization of L2 Vocabulary**

Adriane Geronimo  
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Working memory, once thought of only as short-term memory, refers to the cognitive resources required to store or maintain and process or manipulate information during complex cognitive activity. Learners of English demonstrate cognitive differences in their capacities for storing L2 vocabulary. When learners engage in tasks that deplete existing working memory capacity, such as L2 lexical retrieval, they typically process information slower. In selecting vocabulary for instruction, it is important to select items that will benefit learners and make efficient use of working memory. In grouping words for instruction, it is preferred to group terms by similarity in meaning, rather than phonological similarity, for increased retention. Methods incorporating repeated exposure to new information in verbal, visual, and spatial forms give diverse learners the ability to store and manipulate information needed to complete complex cognitive activities in L2. One such strategy is the Vocabulary LINC strategy, developed by Edwin Ellis at the University of Kansas in response to the needs of learners with learning disabilities; this strategy is effective for language learners as well. It uses a system of mnemonics connected with stories and images to help learners store and later retrieve vocabulary information. With the awareness that working memory is not only storing information, but also manipulating it, another research-based strategy is found in Margarita Calderón's 7 Steps to Language Learning. This method provides language learners with multiple opportunities to store information, culminating in activities designed to process information as well. A final strategy is the Method of loci, or Memory Palace strategy, used in ancient Roman and Greek times but still relevant today, connecting information through spatial and visual mnemonics. Through examination of these methods and their results, participants gain strategies to best address the cognitive diversity found in L2 learners in the area of storing and retrieving vocabulary.

Key words: cognitive differences, diversity, academic language, vocabulary instruction, working memory, lexical retrieval

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## **I. Introduction**

Working memory, while once thought of merely as short-term memory, in fact refers to the cognitive resources required to store or maintain and process or manipulate information during any type of complex cognitive activity. Learners of a second language demonstrate cognitive differences in their capacities for storing L2 vocabulary. When these learners are engaged in tasks that deplete their existing working memory capacity, such as L2 lexical retrieval, they typically process information slower, a luxury that may not be available in all situations. To address these needs, this paper investigates methods for selecting, teaching, and rehearsing L2 vocabulary with diverse learners.

In selecting vocabulary for instruction, it is important to select items that will benefit learners and make efficient use of working memory. This paper discusses several methods for carefully and intentionally selecting vocabulary items for direct instruction.

Instructional methods incorporating repeated exposure to new information in verbal, visual, and spatial forms provide diverse learners with multiple opportunities to store and manipulate information needed to complete complex cognitive activities in L2. While no one method can be said to be the perfect match for all learners, training students in a variety of strategies allows all learners to use those strategies that work best for them in autonomous learning.

One strategy created to meet the needs of diverse learners is the Vocabulary LINCS strategy, developed by Edwin Ellis at the University of Kansas in response to the needs of learners with learning disabilities; this strategy is effective for language learners as well. It uses a system of mnemonics connected with stories and images to help learners store and later retrieve vocabulary information.

With the awareness that working memory is not only storing information, but also manipulating it, another research-based strategy is found in Margarita

Calderon's Seven Steps to Language Learning. This method provides language learners with multiple opportunities to store information, culminating in activities designed to process information as well.

An additional strategy for developing memory capacity in diverse learners is the method of loci, or memory palace strategy, used in ancient Roman and Greek times but still relevant today, connecting information through spatial and visual mnemonics.

Through an examination of these methods and their results, strategies to best address the cognitive diversity found in L2 learners in the areas of storing and retrieving vocabulary are identified.

## **II. Literature Review**

### **1. Working Memory and Language**

According to Alan Baddeley (2003), working memory refers to the storage and further manipulation of information that is needed to complete complex cognitive activities. The components of working memory include the phonological loop, or verbal-acoustic system, the visuospatial sketchpad, the central executive, and the episodic buffer. The phonological loop is a temporary storage system: information stored here tends to decay after only a few seconds. It can, however be refreshed through the use of a subvocal rehearsal system (Baddeley, 2003). Baddeley has also acknowledged that due to the interplay between these two parts of the phonological loop, in learning and memorizing words, similarity of meaning is in fact more important than phonological similarity (1966). The visuospatial sketchpad integrates information from spatial, visual, and possibly kinesthetic or motor input for temporary storage and manipulation. While results depend on the memory task being demanded, this component of working memory permits the language learner not to be disrupted by other sources of task-irrelevant input. The central executive system, overseeing attentional control, is, according to Baddeley (2003), the one factor that most contributes to individual differences in working memory span. This predicts performance on complex cognitive skills, including reaching comprehension. The episodic buffer is a component of working memory that stores information by binding together information from a variety of sources and modalities into chunks, or episodes, allowing for future retrieval of this information. (Baddeley, 2003)

## 2. Working Memory in Science Learning

Yuan et al. (2006) identify working memory as a system for temporary maintenance and manipulation of information during a cognitive task, encompassing both storage and control functions. There is, however, a limit to the amount of information that can be processed during a cognitive task, as both task-relevant and task-irrelevant information are held in working memory. While simple memory tasks may rely primarily upon the storage component of working memory, more complex problem-solving tasks that involve manipulation and re-use of learned information usually call upon the control function as well.

All learners have a set working memory capacity which effectively limits the quantity of information that can be processed. When the cognitive load for a particular task exceeds the individual's working memory capacity, their learning is adversely affected.

According to Yuan et al, content-area instructors can reduce the cognitive load of learners by presenting content area information in a way that is easy to understand and providing examples and models of the expected final production (2006). This helps prevent learners from the pitfall of splitting their attention between task-relevant and task-irrelevant information, which can decrease their working memory capacity for the task at hand. If instructors can reduce the extraneous cognitive load on learners, it is likely to result in improved learning of the targeted content.

Yuan et al. (2006) recommend strategies to improve working memory capacity, such as practice or rehearsal, explicit instruction in memory strategies that establish associations between pieces of information, and cognitive training (2006).

## 3. Working Memory in L1 and L2

Sagarra and Herschensohn agree that working memory refers to those cognitive resources necessary for learners to temporarily store and process information during complex cognitive tasks in both L1 and L2 learning (2010). There exist individual differences in this working memory capacity.

Working memory is closely associated with lexical retrieval and processing demands affect knowledge of new information. More involved tasks that deplete working memory capacity tend to result in reduced storage of lexical information and extended processing times.

Sagarra and Herschensohn found that individuals who demonstrate higher working memory are also exhibit increased accuracy in comprehension tasks (2010). This helps explain why learners with additional cognitive demands struggle to achieve native-like proficiency in a second language. As learners advance into an intermediate stage of L2 language development (ACTFL 2012), they become more sensitive to L1/L2 differences, and they may in fact require more processing time.

However, in their study, Sagarra and Herschensohn found that students who have learned to use not just morphosemantic cues, but also lexical, semantic, and pragmatic cues in L2 comprehension exhibit faster processing times (2010).

#### 4. The English Language Learner Brain

According to Sousa (2011), the young human brain is innately rewired to acquire vocabulary, and to recognize phonemes of the native language while ignoring foreign sounds. This propensity tends to wane around puberty: while adolescent and adult L2 learners certainly can acquire vocabulary, it takes much greater mental effort.

### **III. Selecting Vocabulary for Instruction**

In selecting vocabulary for instruction, it is important to select those items that will most benefit learners, making most efficient use of their working memory.

In grouping words for instruction, it is preferred to organize terms by similarity in meaning, rather than phonological similarity, for increased retention (Baddeley 1966).

Sousa (2011) identifies knowledge of 2,000-3,000 word families as sufficient for understanding conversational English; to comprehend a wide variety of texts, he recommends 8,000-9,000 word families be learned. L2 learners need teacher guidance as to which items to learn as well techniques for learning vocabulary.

We can consider tiers of vocabulary for the purposes of selecting words for instruction. Tier I words are basic vocabulary, sometimes called sight words or Dolch words (developed by Edward Dolch in 1936), or the General Service List first 1000 words. This is the basic vocabulary that all L2 learners should acquire first, and the foundation for Sousa's 2,000-3,000 words necessary to comprehend conversational English.

Tier II words are academic vocabulary found across the content areas, often with multiple meanings depending on the academic context. These words are found in Averill Coxhead's Academic Word List, originally published in 1998.

Tier III words include content-specific vocabulary, sometimes called off-list words. These are those terms that are very important within a specific and limited field of study, but rarely occur elsewhere.

Sousa claims that native speaker intuition in regards to word frequency is often severely limited (2011). One tool to use to identify vocabulary for instruction in a principled way is Tom Cobb's Web Vocabprofile, an adaptation of Healey et al's Range program.

By copying and pasting a text into the Web Vocabprofile site, words will be sorted into the first 1000 and 2000 most frequent words in English, Academic Word List words, and off-list words.

Beginning L2 English learners need to learn the Tier I most frequent words first. This includes frequent function words, such as and, by, this, and while, and also frequently-occurring content words, like activity, family, important, and understand.

At the higher Intermediate stage of language development, instructors should be focusing on Tier II or Academic Word List words to make best use of learners' working memory capacity; these words will be used repeatedly in academic English contexts, regardless of discipline, with differences in meaning depending on the context. This can include words such as component, process, resource, and strategy.

Tier III, or off-list words might be better taught by content-area instructors teaching through the medium of English. This might include items such as absorption, coalition, photosynthesis, or tariff: critically important for comprehension in their particular academic domains, but rarely encountered elsewhere.

#### **IV. Methods**

Sousa agrees that L2 learners benefit from direct instruction of vocabulary embedded in a meaningful context, with frequent opportunities for repetition and use (2011), focus on form and meaning, and exposure to the words in their natural contexts to help learners acquire information about use.

Intentional direct vocabulary instruction, according to Sousa, has been shown to result in increased word learning and reading comprehension, with research-based

strategies being effective for a variety of diverse learners, both native speakers and L2 learners (2011).

### 1. Calderon's Seven Steps

One strategy for explicit vocabulary instruction is Margarita Calderon's seven-step vocabulary teaching process, one component of the Expediting Reading Comprehension for English Language Learners program (2014.) Calderon emphasizes the necessity of explicitly teaching vocabulary: vocabulary knowledge correlates with reading comprehension, while reading comprehension correlated with procedural and content knowledge. Comprehension of a text required knowledge of between 90% and 95% of the words found in the text; less than this and the reader is unlikely to gain information from the text.

Calderon's 7 steps are:

1. The teacher says and shows the word. Students repeat three times.
2. The teacher reads and shows the word in a context sentence from the text.
3. The teacher provides the dictionary definition in formal English.
4. The teacher explains the meaning using learner-friendly language and examples.
5. The teacher highlights one difficult aspect of the word: grammar, spelling, false cognates, polysemy, or word parts.
6. The teacher engages learners in a speaking activity to elicit use of the word and develop concept.
7. The teacher explains how and when learners will be accountable to use the word in future reading/writing activities or assessments. (2018)

Calderon recommends identifying 5-6 words to pre-teach in a session, spending at most 12-15 minutes on vocabulary instruction at the beginning of class (2014). Sousa, similarly, recommends that a total of 10-12 words be taught per week (2011).

This explicit vocabulary instruction strategy is effective for L2 learners with a range of cognitive abilities as it ensures repeated exposure to print and verbal modalities and multiple opportunities for production practice. While heavily teacher-centered, this method is invaluable for front-loading the vocabulary necessary for learners to comprehend a lesson taught in the L2.

### 2. Ellis's LINC'S Vocabulary

Ellis recognizes that success in content classes depends on learners understanding what they hear and read, speaking about content, and ultimately responding to test questions about content. (2000). His LINCS vocabulary strategy proposes to make students active in learning the vocabulary necessary to acquire and express content, as well as teaching them memory strategies they can utilize in their own independent vocabulary learning by connecting new learning to their current knowledge.

While the LINCS vocabulary strategy was developed in response to the needs of learners with learning disabilities, it can also be used effectively to meet the needs of cognitively diverse English learners without any disability.

For this strategy as described in Ellis 2000, learners:

1. Use an index or memory card, divide both sides in half by drawing a line or folding the card.
2. Write the vocabulary word to be learned on the top half of one side and circle it.
3. On the top of the other side, write the definition. This may be a dictionary definition, but should ideally be summarized by the learner, rather than copying the dictionary entry verbatim.
4. On the bottom half of the first side, write a reminding word. This word should be similar in sound or spelling to the targeted vocabulary word. A rhyming dictionary may be helpful for students who are learning this strategy.
5. On the left-hand side of the bottom half of the back of the card, write a short LINCing story. For L2 English learners, this seems most effective with the story contains the targeted word and the reminding word, and is at least one complete sentence. Stories that evoke strong emotion, whether positive or negative, are especially memorable.
6. On the right-hand side of the bottom half of the back of the card, the sketch a quick drawing to accompany the LINCing story.

By creating these cards, students create mental links to help them store and retrieve information about new vocabulary words. They can use these cards as a resource for further self-study and review.

In Ellis's 2000 research, he administered a vocabulary pretest in a content-based social studies class. In one class of mixed students with and without disabilities, the students with learning disabilities scored 53% on the pre-test, while their typical peers scored 84%. After using the LINCS vocabulary strategy, students with

learning disabilities scored 77% on a post-test; the students without disabilities scored 92%. This demonstrates the power of this strategy for all diverse learners: this activity should not be treated merely as an intervention, but also a form of challenge or enrichment as well. In the control class, which did not receive the LINCIS vocabulary strategy intervention, the mean score was 86% on the pre-test and 85% on the post-test. Without intentional interaction with the vocabulary, their comprehension may even dwindle as words are not retained in working memory.

The LINCIS vocabulary strategy is an excellent choice for instruction with cognitively diverse L2 learners. It is very student-centered, as learners personalize their own connections based on their previous knowledge. Students create visual and linguistic hooks to remember vocabulary for short-term and longer-term use.

### 3. Method of Loci or Memory Palace

This ancient method is commonly attributed to Simonides of Ceos in 6th century BCE Greece (Mallom 2017), the sole survivor of a building that collapsed during a dinner he attended. While all other attendees were crushed beyond recognition, Simonides was able to identify the dead by remembering the locations where they had been sitting. Thus was born the method of loci, sometimes also called a memory palace.

Ancient Roman and Greek orators often gave speeches that lasted for hours; these were expected to appear extemporaneous, not read from a prepared script. By mentally placing the key points of a lengthy speech in locations along a familiar route through a city or palace, these speakers were able to visualize a walk along the same journey as they gave their speech, retrieving each item representing the next key point they planned to talk about.

To perform the method of loci, Luciano Passuelo (2008) gives a version of this technique:

1. Choose a memory palace. This should be a place you know well, such as your own home or the route you take to school or work.
2. List distinctive features of this location, a series of objects like doors, tables, or wall hangings that you can picture in your mind as you walk through the location.
3. Imprint the memory palace on your mind by practicing mentally walking through the location in your mind, taking note of all the features of the room in a logical order.

4. Given a list of things to remember, like vocabulary items or points in a speech, make a visual association of each item in order with a feature of the location.
5. Finally, to recall the memorized items, mentally revisit your memory palace, walking through it in the usual order, recalling each item in order.

The method of loci is a mental memorization strategy, and as such cannot be easily observed or assessed in the classroom. Used in conjunction with other vocabulary teaching, learning, and memorization strategies, it activates the visuospatial sketchpad with possible kinesthetic or motor connections to store and maintain vocabulary information. Learners create their own visual associations between new information and that already stored in memory.

Qureshi et al (2014) conducted research to determine whether the method of loci could be used by endocrinology students to learn and recall new topics. They discovered significantly better performance on a multiple-choice assessment of content among learners who listened to didactic lectures and created memory palaces than among those who attended the lectures and completed other self-directed learning tasks, with mean scores of 9.31 among learners who were trained in the method of loci, compared to 8.10 in the other group. The method of loci enables learners to arrange, recall, transfer, and apply memorized content for future success.

## **V. Conclusion**

By intentionally selecting vocabulary for instruction and learning for cognitively diverse L2 English learners, instructors can help their students deal with the limitations of working memory capacity when using their new language in complex cognitive activities.

When learners are trained in and have opportunities to utilize methods such as Calderon's seven steps, Ellis's LINC'S vocabulary strategy, and the method of loci, they create connections across a range of modalities, enabling them to experience success in more complex cognitive tasks that require them to retrieve and manipulate lexical information. As learners demonstrate cognitive differences in the area of vocabulary storage and retrieval, they will also gravitate towards different preferred vocabulary memorization strategies. Maintaining these and other strategies in their instructional toolkit empowers instructors of English to meet the needs of their diverse language learners.

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# **A Case Study of an EFL Reader: Using Miscue Analysis and Retrospective Miscue Analysis for Teaching Reading**

Kyungjin Hwang  
(University of South Carolina)

In Korea, English has been taught as a required subject, but as a university freshman, KH still struggles to read English books. In interviews, she says that English texts are too difficult to understand, and she has no reading strategy to identify the meaning of unknown words. Thus, this case study aims to improve the reading skills of the EFL learner using Miscue Analysis (MA) and Retrospective Miscue Analysis (RMA) and help to become a confident and independent English reader. Reading is a complex cognitive process of decoding symbols to derive meaning. It is also a language process because readers use four language levels simultaneously: graphophonic, syntactic, semantic, and pragmatics to construct meaning (K. Goodman, 2005). Success in this process is measured as reading comprehension. Hence, the study of readers' miscues provides insights into how they integrate the language cueing systems to understand the text. Reading is also a socio-psycholinguistic process (Smith, 2012). This view asserts that readers actively construct the meaning of the text through background knowledge and reading strategies such as sampling, predicting, confirming, and inferring. A miscue is any variation that readers make from the text. MA is a running record and review of the miscues to define a pattern of reading process and strategies during reading. It also provides procedures to help teachers find out information about how students use language cueing systems and a clearer picture of what kinds of instruction they need. RMA involves readers talking about the miscues they made during oral reading (Y. Goodman et al., 2014). Discussing miscues with a teacher helps readers become more confident in reading. Through RMA, readers can keep track of their own meaning-making process and view their miscues as potentials, not mistakes. The implication of this study is that it presents a specific method to teach English reading to EFL readers.

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*window into readers' thinking*. Richard C. Owen Publishers.

Smith, F. (2012). *Understanding reading: A psycholinguistic analysis of reading and learning to read*. Routledge.

I'm currently a second-year graduate student studying for a Ph.D. in language and literacy program at University of South Carolina, the United States of America. I am interested in the policies of Korean English education, and English teaching and learning in Korean schools based on my personal experience of an English teacher at Korean secondary school. In addition, I also study about language ideology, reading and writing education, miscue analysis, bilingualism and multimodality.



## 2020 GETA Annual Conference

### A Case Study of an EFL Reader: Using Miscue Analysis and Retrospective Miscue Analysis for Teaching Reading

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## “INTERESTED IN TEACHING READING USING MISCUAE ANALYSIS?”

**This case study aims to improve the reading skills of the EFL learner using Miscue Analysis (MA) and Retrospective Miscue Analysis (RMA) and help to become a confident and independent English reader.**

*A miscue is any variation that readers make from the text. **Miscue Analysis (MA)** is a running record and review of the miscues to define a pattern of reading process and strategies during reading. **Retrospective Miscue Analysis (RMA)** involves readers talking about the miscues they made during oral reading (Y. Goodman et al., 2014). One-on-one reading conference on reading strategies and use of language cueing systems, readers can keep track of their own meaning-making process and view their miscues as potentials, not mistakes.*

## **A Qualitative Study of the Use of Connectors in Intermediate English Writing by Korean College Students**

Taehee Kim & Mae-Ran Park  
(Pukyong National University)

The purpose of the current study was to analyze Korean college students' English writing corpus focusing on the use of connectors. The participants were six students out of 24 students who took the Intermediate English Composition 1 in a local university in Busan during the semester 1 of 2020. For the research method, the authors interviewed the volunteered students using the structural interview with eight questions. The findings of the study are as follows: First, 21.1% of the participants experienced difficulties in maintaining coherence across sentences or across paragraphs using English connectors. Next, regarding how they learned to use English connectors in their compositions, they answered in a variety of ways: A few practiced the use of English connectors through CLOZE test-like exercises, while the rest of them were taught to write sentences or essays with connectors and to correct the misused connectors. Half of them mentioned that they improved both their writing skills and the use of connectors as they wrote more essays in English. In addition, four students pointed out the importance of studying connectors and two students did not. Lastly, although two participants did not feel the necessity of studying connectors, one interviewee admitted that she overused 'and' and learning about the use of various connectors gave positive effects to her essay writings. The findings will shed light on how writing instructors understand Korean college students' difficulties and find ways to better teach the use of connectors in their English writing. (243 words)

**Taehee Kim** is a doctoral student at Pukyong National University, Korea. Her research interests include ELT methodology and corpus linguistics. She has taught English from elementary school children to secondary school students. Ms. Kim can be contacted at 0218kth@hanmail.net.

**Mae-Ran Park** is a professor at Pukyong National University, Korea. Her research interests include ELT methodology, materials development, and professional development. She is a former president of Pan Korea English Teachers Association (PKETA). Dr. Park obtained her master's degree in TESL and Ph. D. in Education from the University of Illinois-Urbana, U.S. She was a visiting scholar at

Ritsumeikan University, Japan in 1995 and at Harvard University, U.S. in 2006. She has given numerous presentations in Japan, Australia, Malaysia, India, Thailand, the Philippines, Singapore, Hong Kong, Vietnam, China, Russia, Indonesia, Macao, and U.S. She serves as the committee chair for the elementary school English textbook authorization in Korea. She can be contacted at [mrpark@pknu.ac.kr](mailto:mrpark@pknu.ac.kr).

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## A Qualitative Study of the Use of Connectors in Intermediate English Writing by Korean College Students

Taehee Kim & Mae-Ran Park  
Pukyong National University

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### I. Introduction Purpose of the study

- ▶ Although numerous previous studies have investigated learners' use of connectors, most of them have focused on corpus-based connectors and connector misuse.
- ▶ Overuse and misuse of connectors result from English education practices (Granger & Tyson, 1996; Ha, 2014; Ryoo, 2007; Xu & Liu, 2012; Yoon, 2006).
- ▶ Misuse cases of connectors were analyzed qualitatively (홍정혜, 2018; Jung, 2013): Interviews and surveys have not been conducted.



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## CONTENT

- I. Introduction
  - purpose of the study
  - research questions
- II. Previous Studies
  - Previous studies overseas
  - Previous studies in Korea
- III. Research Method
  - Participants' demographic info
  - Instruments
- IV. Results & Discussion
  - Questionnaire survey and structural interview
  - Results
- V. Conclusions
  - Conclusions and limitations

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### Research Questions

- 1) How do college students learn English connectors in English writing classes?
- 2) What are some difficulties when they face in terms of English connector use?
- 3) What are some writing strategies that these students use during pre-writing and post-writing?

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## II. Previous Studies Overseas

- ▶ Ibtisam (2015): 20 postgraduate international students in Australia
  - major difficulties: coherence, cohesion > expressing their own voice> paraphrasing
- ▶ Phakiti & Li (2011): academic reading and writing difficulties (Asian ESL international students in Master's Degree in TESOL)
  - Likert-scale questionnaire: 51 students
  - Semi-structured interview: 11 students
  - reading (academic vocabulary) > academic writing (synthesizing ideas from various sources, lacking students' voice)
  - composing an extensive writing: 2,500 words for assignment

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## II. Previous Studies in Korea

- ▶ 김영숙(2007): 4 Korean high school students who studied in the U.S
  - writing is the weakest part: 3 students
  - check and correct their grammar errors on their own > get others' help
- ▶ 조혜윤(2006): 20 students in English writing class
  - difficulties of English writing: learners' lack of effort, lack of background knowledge, interference of their first language, difficulties of target language

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## II. Previous Studies in Korea

- ▶ 임정완, 최에레사(2008): 82 students
  - frequent errors: NP, VP, structure of the sentences
  - 87.8%: learners' lack of effort
  - 73.1%: interference of learners' first language
  - 74.7%: lack of English vocabulary
- Survey
- Questionnaires related to the use of connectors were not included.

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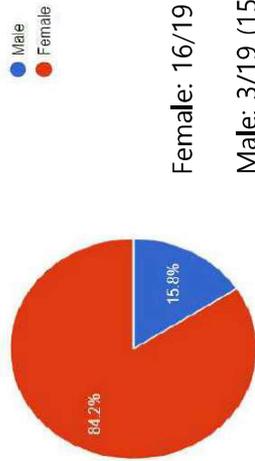
## III. Research Method

1. Participants: 19 college students
2. Instruments: Questionnaire survey and structural interviews
3. Data analysis

## Participants: Gender

1. What is your gender?

응답 19개



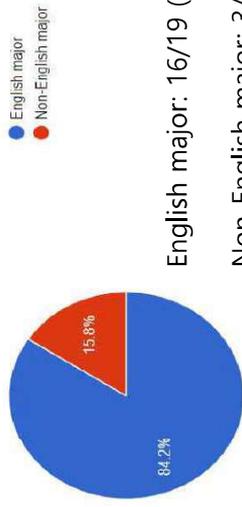
Female: 16/19 (84.2%)

Male: 3/19 (15.8%)

## Participants: Major

2. What is your major?

응답 19개



English major: 16/19 (84.2%)

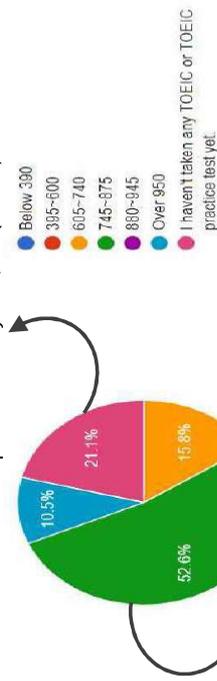
Non-English major: 3/19 (15.8%)

## Participants: TOEIC Score

3. What is your TOEIC score? (You may provide your TOEIC practice score.)

응답 19개

I haven't taken any TOEIC or TOEIC practice test yet: 4/19 (21.1%)



745~875: 10/19 (52.6%)

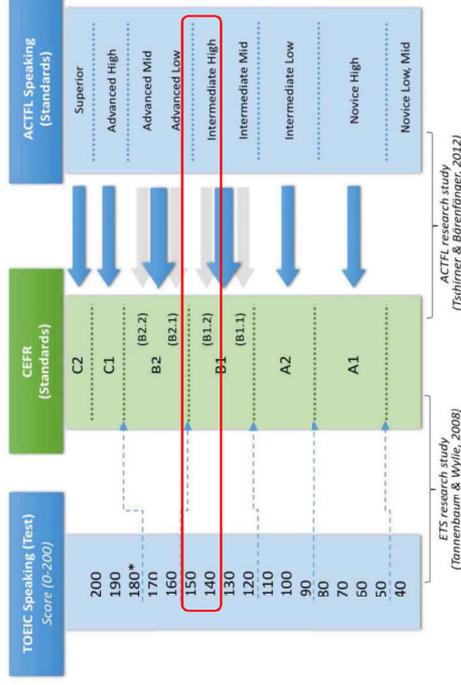
## Participants' TOEIC Score

TOEIC®/TOEIC® Speaking 상관관계

Speaking Level	TOEIC® Speaking		TOEIC® L/R	
	Scaled Score	TOEIC 평균점수	TOEIC 점수범위	TOEIC 점수범위
3 and below	70 and below	285	0~345	0~345
4	80	370	350~390	350~390
	90	430	395~480	395~480
	100	500	485~550	485~550
5	110	570	535~600	535~600
	120	640	605~670	605~670
	130	710	675~740	675~740
6	140	780	745~810	745~810
	150	845	815~975	815~975
	160	910	880~945	880~945
7 and above	170 and above	975	950~990	950~990

Reference: ETS TOEIC Speaking test website (<https://exam.ybmmnet.co.kr/toeicswr/introduce/relation.asp>)

## Participants' TOEIC Score

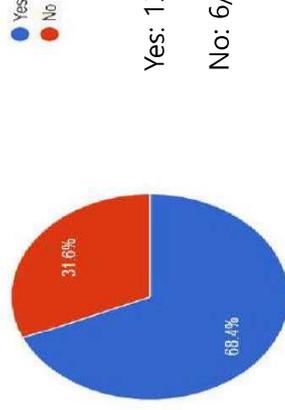


Reference: Best Practices for Comparing TOEIC® Speaking Test Scores to Other Assessments and Standards: A Score User's Guide (Jonathan Schmidgall, 2018)

## Participants' experience of staying abroad

4. Do you have any experience of staying abroad?

응답 19개



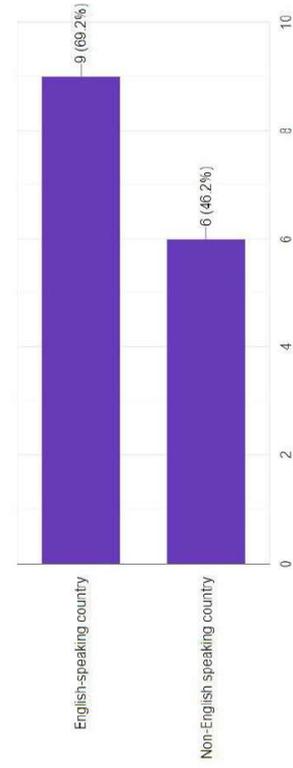
Yes: 13/19 (68.4%)

No: 6/19 (31.6%)

## Participants' experience of staying abroad

4-1. If you have experience of staying abroad, check below where you stayed. (Multiple choices possible.)

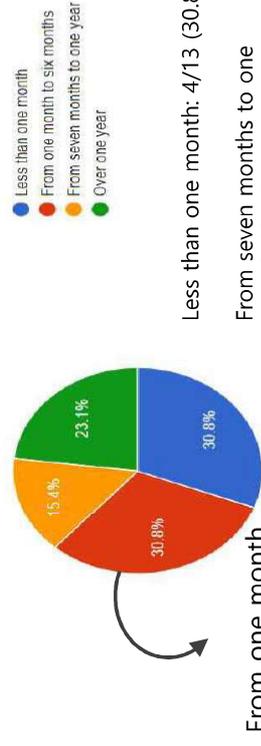
응답 13개



## Participants' experience of staying abroad

4-2. If you have experience of staying abroad, how long was your stay?

응답 13개



Less than one month: 4/13 (30.8%)

From seven months to one year: 2/13 (15.4%)

Over one year: 3/13 (23.1%)

From one month to six months: 4/13 (30.8%)

## Participants' experience of staying abroad

4-3. If you have experience of staying abroad, what is your purpose of the stay? (Multiple choices possible.)

응답 13기



## Questionnaire Survey

3. 영작을 할 때 어떤 단어가 적절하지 잘 모르겠다.  
 ① 전혀 그렇지 않다. ② 약간 그렇다. ③ 보통이다. ④ 상당히 그렇다. ⑤ 매우 그렇다.
4. 한국어로 작문을 할 때보다 영작문을 할 때 표현이나 생각이 단순해진다.  
 ① 전혀 그렇지 않다. ② 약간 그렇다. ③ 보통이다. ④ 상당히 그렇다. ⑤
8. 영어에는 한국에 없는 문법 아이탬들로 인해 영작문이 어렵다. (예: 친치사, 관사)  
 ① 전혀 그렇지 않다. ② 약간 그렇다. ③ 보통이다. ④ 상당히 그렇다. ⑤ 매우 그렇다.

조혜윤. (2006). 영작문에서 겪는 어려움에 대한 질적 연구 - 한국 대학생을 중심으로. 석사학위논문.

## Questionnaire Survey

6. I make an outline including the main points of my assignment.			
7. I go back to my writing to revise the content and make my ideas clearer.			
8. I go back to my writing to edit the grammar, vocabulary, spelling, and punctuation.			
9. In my assignments, in general, I pay more attention to the language (e.g. spelling, grammar, vocabulary) than to the content (e.g. ideas, organization)			

Ibtisam, A.H.A.B. (2015). Academic Writing Difficulties of ESL Learners. 2015 WEI International Academic Conference Proceedings.

## 13 questions on the 5-level Likert scale

	N	Mean	SD
1 I make an outline including the main points of my assignment.	19	3.79	0.63
2 I go back to my writing to revise the content and make my ideas clearer.	19	4.11	0.66
3 I go back to my writing to edit the grammar, vocabulary, spelling, and punctuation.	19	4.26	0.56
4 In my assignments, in general, I pay more attention to the language (e.g. spelling, grammar, vocabulary) than to the content (e.g. ideas, organization).	19	2.95	0.85
5 I pay more attention to the content (e.g. ideas, organization) than the language (e.g. spelling, grammar, vocabulary).	19	3.68	0.95
6 I give almost equal attention to both the language (e.g. spelling, grammar, vocabulary) and the content (e.g. ideas, organization).	19	3.58	0.96
7 I translated either Korean or my native language into English in English writing.	19	3.21	0.85

## 13 questions on the 5-level Likert Scale

internal consistency reliability: .742

		N	Mean	SD
8	I don't know how to express what I want to write in English.	19	2.32	1.16
9	I don't know which word is appropriate for English writing.	19	2.58	1.12
10	When I write in English, expressions and thoughts are simpler than writing in either Korean or my native language.	19	3.21	0.92
11	English writing is difficult because of grammatical items that are not in either Korean or my native language (prepositions, articles, etc.).	19	3.11	1.05
12	I cannot apply English grammar rules in my writing.	19	2.16	0.76
13	It is difficult to use appropriate expressions across sentences or across paragraphs.	19	2.79	0.85

## Structural interview questions

1. How do you usually plan your English writing before you write?
2. What methods do you use in English writing?
3. Have you studied connectors in English writing classes at the university? What are some ways to learn English writing at the university?
4. Write the top ten most used connectors when you write in English.
5. If you do not have any experience of studying connectors or feel the experience is not enough, how do you improve your skills to use connectors?

## Structural interview questions

6. If you feel the need of studying about connectors, explain the specific reasons.
7. There are three common ways to brainstorm before writing in English: semantic mapping, free writing, and outlining. Which method(s) do you usually use?
8. What are your ways to revise your writing after the draft writing?

## Data analysis

- ▶ How do college students learn English connectors in English writing class?  
→ SPSS frequency analysis + qualitative analysis
- ▶ What are some difficulties when college students face in terms of English connectors?  
→ Qualitative analysis
- ▶ What are some strategies in English writing that students use focusing on prewriting and post writing?  
→ SPSS frequency analysis + qualitative analysis

## IV. Results of the study

- ① How do college students learn English connectors in English writing class?

<Table 1> Difficult to use appropriate expressions across sentences or across paragraphs

	빈도	퍼센트	유호 퍼센트	누적 퍼센트
유호	1	5.3	5.3	5.3
	6	31.6	31.6	36.8
	8	42.1	42.1	78.9
	4	21.1	21.1	100.0
전체	19	100.0	100.0	

## IV. Results of the study (cont'd)

- Crewe (1990), Yoon (2006): lists of connectors that have similar meanings
- Mostly the participants learn connectors that have similar functions or categories.

[질적 분석 자료]

- 접속어의 다양한 종류를 유사한 뜻을 가진 접속어 위주로 배웠다.

JW

- 비슷한 기능을 하는 접속사끼리 묶는 방법으로 배웠다.

## IV. Results of the study (cont'd)

[질적 분석 자료]

YJ

- 접속어가 적절하게 사용된 문장을 참고하여 해당 접속어를 사용해 작문해보고, 접속어가 잘못 쓰인 문장은 교쳐보면서 학습했다.

DH

- 대학에서 교양과 전공 시간에 접속어를 배운 적이 있다. 접속어가 사용된 문장을 독해하면서 그 접속어의 뜻과 동의어, 주로 사용되는 위치 등을 배웠다. 뿐만 아니라 영작문 시간에 상형 별로 적절한 접속어를 직접 배우고 외우기도 하였다. 하지만 무엇보다 내가 영작을 하며 직접 접속어를 사용해 볼 때 가장 큰 효과를 본 것 같다.

## IV. Results of the study (cont'd)

[질적 분석 자료]

CL

- 비슷한 기능을 하거나 비슷한 형태를 가져오는 접속사끼리 묶어서 학습하였다. (예를 들어 등위 접속사 and, but, or은 A와 B를 연결하는 기능을 하며 A와 B의 형태가 같아야 한다. 또 는 because, since, while 등의 접속사 뒤에는 주어와 동사가 온다. 등)

## IV. Results of the study

- ▶ ② What are some difficulties when college students face in terms of English connectors?

[질적 분석 자료]

YM

- 영어 접속어 사용을 향상 시키기 위해서는 많은 글쓰기 경험이 필요하다고 생각합니다. 실제로 작문 수업을 들으면서 하는 에세이 과제를 통해 글쓰기 실력이 향상 되는 것을 느꼈고, 그 것과 동시에 **접속사의 사용 방법도** 익히게 되었습니다. **특정 접속사를 여러가지 방법으로 사용해 보며 글쓰기를 하는 것이** 접속사 사용을 향상 시키는 데에 좋다고 생각합니다.

## IV. Results of the study (cont'd)

- ▶ experiences that students feel the necessity of studying connectors

[질적 분석 자료]

YM

- 가끔 작문을 할 때 이런 부분에서는 어떤 접속사가 제일 좋지? 어떤 접속사를 사용해야 한국말로 말하는 것처럼 자연스럽게 말할 수 있지? 라는 고민을 할 때가 많았습니다. 이런 고민을 할 때마다 더 다양한 접속어의 학습이 필요하다고 느꼈습니다.

JY

- 접속사가 영작에서 중요한 부분을 차지하고 있기 때문에 접속사를 올바르게 사용하는 능력이 매우 중요하다고 생각합니다. 영작 과제나 시험에서 접속사는 꼭 빠지지 않는 문제 중 하나이기 때문에 접속사를 무작정 많이 사용하기 보다는 적절한 위치에서 사용하는 것이 중요하기에 접속사가 사용된 여러 문장을 통해서 적절한 위치를 찾는 능력을 키우는 것이 중요하다고 생각합니다.

## IV. Results of the study (cont'd)

[질적 분석 자료]

JW

- **간단한 문장을 영작하면서 접속사를 사용하는 것이 가장 효과적**으로 접속사를 학습하는 방법이라고 생각합니다.

DH

- 제시된 문장 속에서 접속어를 찾고, 외우는 것도 좋지만 무엇보다 **영작하면서 직접 써보는 것이 중요하다고 생각한다.** 본인이 직접 고민하고 생각하고 찾아보면서 문장 사이에 넣은 접속어는 잘 기억나기 때문에 배우는 것과 동시에 자주 쓰는 것이 중요하다고 생각한다.

## IV. Results of the study (cont'd)

- ▶ experiences that students feel the necessity of studying connectors

[질적 분석 자료]

YJ

- 작문을 할 때, 문장과 문장이 매끄럽게 연결되기 위해 필요한 요소인 접속어를 적절하게 사용하는 것이 글을 더욱 **가독성** 좋게 만들어 주기 때문이다.

## IV. Results of the study (cont'd)

- ▶ experiences that students feel the unnecessary of studying connectors

[질적 분석 자료]  
JW

- 접속사 학습의 필요성을 느낀 적은 없습니다.

CL

- 부족하다고 느끼지 않는다. 하지만 어떤 접속사를 사용할 때 주의해야 할 점이 무엇인지에 대해 여러 번 상기 시켜주는 것은 접속사를 더욱 올바르게 사용할 수 있게 도와준다. 영적 시 접속사를 써야하는 경우에서 "and"만 무작위적으로 많이 쓰는 경우가 있는 것 같다. 더 좋은 글쓰기를 위해서는 다양한 접속사를 쓰는 것이 더 좋을 것 같다. 더 좋은 글쓰기를 위해서는 다양한 접속사를 알게 된다면 우리는 글쓰기에 있어 다양한 접속어를 사용할 수 있으므로 더욱 좋은 글쓰기를 하는 데 기여한다고 생각한다.

## IV. Results of the study (cont'd)

- ▶ ③ What are some strategies in English writing that students use focusing on prewriting and post writing?

<Table 2> Q 1. I make an outline including the main points of my assignment.

유호	빈도	퍼센트	유호 퍼센트	누적 퍼센트
3	6	31.6	31.6	31.6
4	11	57.9	57.9	89.5
5	2	10.5	10.5	100.0
전체	19	100.0	100.0	

## IV. Results of the study (cont'd)

- ▶ considering points in prewriting stage: data collection about topic, setting the topic, requirements of the assignment

[질적 분석 자료]  
YJ

- 글쓰기 전 주제에 관한 간단한 브레인스토밍을 통해 어떤 내용으로 구성할 것인지 생각해 본다. 각 문단마다 들어가야 할 주장, 그를 뒷받침하는 근거 등을 최대한 꼼꼼하게 찾아본다. 주어진 과제에 대한 특별한 요구사항이 있다면 잊지 않고 포함하기 위해 제일 우선순위에 두고 개요를 짠다.

JY

- 주어진 과제에 대한 교수자의 요구사항이 무엇인지 확인해보고 질문을 여러 측면에서 생각해 본다. 질문을 어떻게 해석하고 받아들이는지에 따라 다른 답변이 나올 수 있기 때문에 질문을 다르게 생각해 본다. 주제에 관련된 한 글이나 자료를 찾아보고 다른 사람들의 생각을 확인해 본다.

## IV. Results of the study (cont'd)

- ▶ types of brainstorming: outlining

[질적 분석 자료]

YJ

- 개요 작성을 주로 사용한다. 특히, 주장을 뒷받침하는 근거를 두세 가지 간추려 범주화 한 뒤, 세부 사항으로 구성된 하위 내용을 작성하는 방식이 가장 편리한 방법이라고 생각한다. 간단한 개요를 작성하고 나면, 글의 방향성은 물론이고 전체적인 글의 틀이 잡히기 때문에 작문 전에 개요 작성을 필수적으로 하는 편이다.

DH

- 나는 개요 작성을 가장 많이 쓴다. 개요 작성을 했을 때 글의 통일성이 가장 잘 지켜지는 것 같았다.

## IV. Results of the study (cont'd)

- ▶ types of brainstorming: multiple-used

[질적 분석 자료]

JW

- 일단 자유 작문을 통해서 생각나는 바를 글로 옮기고 그 이후에 개요 작성을 통해 글을 다듬습니다. 한 주제에 대해서 생각나는 대로 글을 작성하다 보면 핵심적인 단어가 글 곳곳에 나타나기 때문에 자유 작문으로 글을 작성하고 그 글에서 핵심적인 요소를 찾아 개요 작성 방식으로 글을 다듬고 마무리합니다.

## IV. Results of the study (cont'd)

- ▶ types of brainstorming: multiple-used

[질적 분석 자료]

CL

- 나는 주로 자유 작문의 방법을 사용한다. 어떠한 주제를 받으면 문단을 어떻게 나눌 것이며 내용을 어떤 흐름으로 전개해 나갈 것인지 바로 떠오르기 때문이다.  
하지만 때론 다양하고 폭 넓은 사고가 필요할 때도 있다. 그럴 때에는 마인드맵 즉, 의미 지도 사용의 방식을 종종 사용하기도 된다.  
나는 자유 작문을 주로 사용하긴 하지만 의미 지도 사용과 함께 두 가지 방법을 통해 주로 작문을 한다고 생각한다.

## IV. Results of the study (cont'd)

- ▶ reread after writing

< Table 3 > Q 2. I go back to my writing to revise the content and make my ideas clearer.

	빈도	퍼센트	유효 퍼센트	누적 퍼센트
유효	3	15.8	15.8	15.8
	4	11	57.9	73.7
	5	26.3	26.3	100.0
전체	19	100.0	100.0	

## IV. Results of the study (cont'd)

- ▶ purpose of reread after writing: finding out weakness of their writing, clarification of their voice

[질적 분석 자료]

JW

- 작성한 글을 처음부터 다시 읽어보고 내 글에서 부족한 점이나 반박할 점을 찾아 글을 보충한다.

YM

- 어떻게 해야 내 생각을 잘 전달할 수 있을지를 끊임없이 생각하며 글을 쓰는 편입니다. 글을 쓴 후 한 번 전체적으로 읽어보면서 어떤 부분에서 허점이 보이지는 않는지, 이유가 불충분한 부분은 없는지 검토합니다. 최대한 간결하며 분명하게 글을 전달하기 위해 글을 쓰고 여러 번 읽어봅니다.

## IV. Results of the study (cont'd)

- ▶ purpose of reread after writing: revising the content

<Table 4> Q 4. In my assignments, in general, I pay more attention to the content than to the language.

유호	빈도	퍼센트	유호 퍼센트	누적 퍼센트
2	3	15.8	15.8	15.8
3	3	15.8	15.8	31.6
4	10	52.6	52.6	84.2
5	3	15.8	15.8	100.0
전체	19	100.0	100.0	

## IV. Results of the study (cont'd)

- ▶ post-writing

[질적 분석 자료]

DH

- 가장 먼저 눈에 쉽게 들어오는 오타를 수정한다. 이후에 문법적인 오류를 고치기 위해 문장 구조나 동사의 쓰임을 확인한다. 그리고 한글로 다시 번역해보며 매끄럽지 못한 부분이 있는지 확인한다. 마지막으로 문장 부호를 확인한다.

CL

- 나는 무조건 내가 쓴 글을 다시 읽어보며 어색한 문장은 없는지, 어휘는 적절히 잘 썼는지, 오타가 난 곳은 없는지 확인한다. 때문 기호가 있으면 다른 사람에게 내가 영작한 것을 보여주고 피드백을 받은 후 수정한다.

## IV. Results of the study (cont'd)

- ▶ post-writing

<Table 5> Q 3. I go back to my writing to edit the grammar, vocabulary, spelling, and punctuation.>

유호	빈도	퍼센트	유호 퍼센트	누적 퍼센트
3	1	5.3	5.3	5.3
4	12	63.2	63.2	68.4
5	6	31.6	31.6	100.0
전체	19	100.0	100.0	

## V. Conclusions & Limitations

### Conclusions

- ▶ One participant learned connectors in the settings that memorize the connectors which has similar meanings, mostly learners were taught connectors that have similar functions or categories.
- ▶ The students who feel the necessity of studying connectors want to learn how to use them correctly due to readers' readability, naturalness in English writing, and high importance of connectors in English writing and tests.
- ▶ Although two participants did not feel the necessity of studying connectors, one interviewee admitted that she overused 'and' and learning about the use of various connectors gave positive effects to her essay writings.

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## Limitations of the study

- Small scale survey: 19 participants for the questionnaire survey and 6 participants for structural interviews
- structural interview by using e-mail

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Thank you!

## **A Review of Research on Learner Autonomy over the Past 20 Years in China**

Nanyun Li<sup>1,2</sup> and Hyesook Park<sup>1</sup>

(<sup>1</sup>Kunsan National University, <sup>2</sup>Jiujiang University)

This paper is to critically review the current research studies of learner autonomy (LA) regarding English as a foreign language teaching in China over the last 20 years. 154 LA research papers published in 13 Chinese foreign language core journals from 1998 to 2019 were analyzed. The results showed that: 1) In terms of the number of published LA papers, there was an overall upward trend, reaching the peak from 2006 to 2009; 2) As for research methods, empirical studies of LA were on the rise as a whole, while the research instruments mainly relied on questionnaires and interviews; 3) On research participants, Chinese LA focused more on the undergraduates, among which non-English majors were in the spotlight; 4) Regarding the research contents, the influencing factors of LA and LA platform/mode were the main focus; 5) Considering the influencing factors of LA, single factor analysis was predominant. Wherein learning strategies and motivation were the most frequently examined factors affecting learners' LA, followed by English proficiency, teachers' role, and self-efficacy. Further analysis revealed that there was a lack of comprehensive empirical analysis on the internal and external influencing factors of LA. Finally, suggestions for future research are given.

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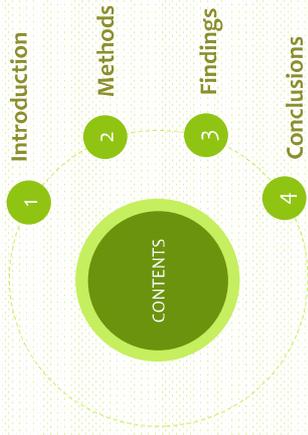
# A Review of Research on Learner Autonomy over the Past 20 Years in China



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GETA 2020



## 1. Introduction

Definition of learner autonomy

Holec (1981) defined learner autonomy (LA) as “the ability to take charge of one’s own learning” (p. 3).

Development in China

Since Holec first introduced the concept of LA into foreign language teaching, it has been studied for nearly 40 years.

Li Hong (1998) published a paper titled *Learner Autonomy and English Teaching in China*, which marked the beginning of LA research in China.



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## 1. Introduction

Gao (2005, 2006) summarized three stages of LA research: The budding period (1991-2000), the slow development period (2001-2003), and the all-around start-up period (2004-).

Liu and Dong (2012) found that LA studies mainly focus on theories, rather than on empiricism.

Wang (2013) revealed that Chinese LA research has made certain progress in the aspects of the number of published papers and the diversity of research methods from 1998 to 2012.

Not much literature on the research status of LA in China.  
Lack of systematic literature statistics from 2013 to 2019.

The present study aims to provide a critical review of LA regarding English as a foreign language teaching in China over the past 20 years.



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## 2. Methods

154 LA research papers (1998-2019) published in 13 Chinese foreign language core journals were analyzed in terms of the number of papers, research methods, research participants, research contents, and influencing factors.



China National Knowledge Infrastructure (CNKI) with time span from 1998-2019

Research papers from 13 Chinese foreign language core journals

Chinese Social Sciences Citation Index (CSCCI) source journals with teaching research paper columns



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## 2. Methods

Table 1. List of 13 mainland Chinese foreign language core Journals

No.	Chinese Title	Journal Title	Compound Impact Factors
1	外语界	Foreign Language World	8.048
2	现代外语	Modern Foreign Languages	3.548
3	外语与外语教学	Foreign Languages and Their Teaching	2.270
4	外语教学与研究	Technology Enhanced Foreign Language Education	2.213
5	外语教学与研究	Foreign Language Teaching and Research	2.157
6	中国外语	Foreign Languages in China	2.144
7	外语教学	Foreign Language Education	1.783
8	外语教学理论与实践	Foreign Language Learning Theory and Practice	1.421
9	外语	Journal of Foreign Languages	1.286
10	外语研究	Foreign Languages Research	1.189
11	解放军外国语学院学报	Journal of PLA University of Foreign Languages	1.155
12	外语学习	Foreign Language Research	1.155
13	西安外国语大学学报	Journal of Xi'an International Studies University	1.051



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## 2. Methods



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## 3. Findings

An overall upward trend in the number of papers published, reaching the maximum from 2006 to 2009.

Table 2. Research papers (1998-2019)

Journal	1998-2001	2002-2005	2006-2009	2010-2013	2014-2019	Total	Percent (%)
Foreign Language Education and Research	4	7	5	9	85	100	16.23
Foreign Language World	2	11	18	8	4	43	27.92
Foreign Languages and Their Teaching	1	8	2	3	14	28	9.09
Foreign Languages in China	5	7	3	15	9	49	9.74
Modern Foreign Languages	1	5	11	17	9	43	27.92
Foreign Language Research	1	1	1	1	1	5	0.65
Journal of PLA University of Foreign Languages	1	2	3	1	3	10	1.05
Journal of Foreign Languages	2	1	1	1	3	8	1.95
Journal of Xi'an International Studies University	1	1	1	1	1	5	0.65
<b>Total</b>	<b>4</b>	<b>22</b>	<b>48</b>	<b>42</b>	<b>37</b>	<b>154</b>	<b>100.00</b>
<b>Percent (%)</b>	<b>2.60</b>	<b>14.29</b>	<b>31.82</b>	<b>27.27</b>	<b>24.03</b>	<b>100.00</b>	



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Kunsan National University

### 3. Findings

Table 3. Research methods (1998-2019)

Research Method	1998-2001		2002-2005		2006-2009		2010-2013		2014-2019		Total	Percent (%)
	1998-2001	2002-2005	2006-2009	2010-2013	2014-2019	2010-2013	2014-2019					
Empirical studies	13	36	28	35	112	72.73						
Theoretical research	4	9	13	14	2	42	27.27					
Total	4	22	49	42	37	154	100.00					
Percent (%)	2.60	14.29	31.82	27.27	24.03	100.00						

Empirical studies of LA were on the rise as a whole.



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### 3. Findings

Table 4. Frequency of research instruments in LA empirical studies

Instruments	Frequency	Percent (%)
questionnaire interview	95	84.82
teaching experiment	56	50.00
test	29	25.89
classroom observation	10	8.93
learning journal	6	5.36
learning diary	4	3.57
learning contract	1	0.89
learning platform survey	1	0.89

Research instruments mainly relied on questionnaires and interviews



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### 3. Findings

Chinese LA research participants focused more on the undergraduates.

Table 5. Research participants of empirical studies (1998-2019)

Participants	2002-2005		2006-2009		2010-2013		2014-2019		Total	Percent (%)
	2002-2005	2006-2009	2010-2013	2014-2019						
Adults			1	1					2	0.89
English Teachers		2	2	2	4				8	3.57
Junior College Students	1	1			2				4	1.79
Middle School Students			1		1				2	0.89
Mixed Groups of Students	1				1				2	0.89
Postgraduates	1	2	2	2	7				12	6.25
Undergraduates	8	27	22	32	89				148	79.46
Undergraduates and English Teachers	2	4		1	7				13	6.25
Total	13	38	28	85	112				246	100.00
Percent (%)	11.81	32.14	25.00	31.25	100.00					

Note: Mixed groups of students=High School Students, Undergraduates, and Postgraduates



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### 3. Findings

Table 6. Undergraduates' major distribution of empirical studies (1998-2019)

Major	2002-2005		2006-2009		2010-2013		2014-2019		Total	Percent (%)
	2002-2005	2006-2009	2010-2013	2014-2019						
English	1	5	2	8					16	18.87
English & Non-English	1	4	2	0					7	7.29
Non-English	8	22	18	25	73				73	78.04
Total	10	31	22	33	96				162	100.00
Percent (%)	10.42	32.29	22.92	34.38	100.00					

Non-English majors were in the spotlight.



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### 3. Findings

Table 7. Research contents (1998-2019)

Research Content	1998-2001	2002-2005	2006-2009	2010-2013	2014-2019	Total	Percent (%)
Cultural Appropriateness	1	1	1	1	3	3	1.95
Study on the influencing factors of LA	10	20	18	18	66	66	42.86
Introduction to the LA research	1	1	2	1	5	5	3.25
LA platform/ mode	2	7	19	13	14	55	35.71
LA Scale				3	3	3	1.90
Teacher Autonomy			1	2	3	3	1.95
Teachers' Role			4	3	7	7	4.55
Cultivation of LA Ability	1	4	3	4	1	13	8.44
<b>Total</b>	<b>4</b>	<b>22</b>	<b>49</b>	<b>42</b>	<b>97</b>	<b>154</b>	<b>100.00</b>
Percent (%)	2.60	14.29	31.82	27.27	24.03	100.00	

The influencing factors of LA and LA platform/mode were the main focus.

### 3. Findings

Table 8. Influencing factors analysis of LA studies (1998-2019)

Factor analysis	2002-2005	2006-2009	2010-2013	2014-2019	Total	Percent (%)
Single factor analysis	4	15	12	12	43	58.90
Multi-factor analysis	6	9	6	9	30	41.10
<b>Total</b>	<b>10</b>	<b>24</b>	<b>18</b>	<b>21</b>	<b>73</b>	<b>100.00</b>
Percent (%)	13.70	32.88	24.66	28.77	100.00	

Single factor analysis was predominant.

### 3. Findings

Table 9. High-frequency of LA related influence factors (1998-2019)

Factors	Frequency	Percent (%)
Learning strategies	25	36.23
Motivation	16	23.19
English proficiency	11	15.94
Teachers' role	9	13.04
Self-efficacy	8	11.59

learning strategies and motivation were the most frequently examined factors affecting learners' autonomy, followed by English proficiency, teachers' role, and self-efficacy.

### 4. Conclusions

1 Most LA research participants were undergraduates, there were not many surveys aimed at teacher participants.

2 Empirical studies of LA showed an upward trend as a whole, while the instruments mainly relied on questionnaires and interviews.

3 Single factor analysis accounted for a large proportion of the influencing factors of LA.

#### 4. Conclusions

A Teachers should also be important participants.

B Go deep into the classroom to make real observations.

C Empirical analysis on the internal and external influencing factors of LA is needed.

Future Research



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## A Review of Research on Learner Autonomy over the Past 20 Years in China

Nanyun Li<sup>1,2</sup> and Hyesook Park<sup>1</sup>

<sup>1</sup>Kunsan National University, Korea, <sup>2</sup>Jiujiang University, China

# Thanks!

## **Investigating Test Practices and Washback Effects: Implications for Primary School English Teachers in Hong Kong**

Jiayi Min & Moonyoung Park<sup>1)</sup>  
(Chinese University of Hong Kong)

The L2 assessment system in Hong Kong has been criticized for a long time as examination-oriented and the overarching paradigm of high-stake exams. Although L2 teachers in Hong Kong have been seen as the major agents to foster positive washback effects, the reverberations of L2 teachers' understanding of assessment or how they respond to the change of exam is relatively unexplored. This study aims to examine the washback effects of school exams on teachers' perceptions and behavioral changes in school-based exams. The primary focus is paid on the phenomenon of the washback effect in light of school policy, English curriculum development, and school-based exam in a Hong Kong local primary school. A semi-structured interview has conducted in a local primary school with three English teachers. The main findings reinforce that washback effects are influenced by the length of the lesson, intensity of teaching content, students' language foundation, and learning attitude. Insights of how these factors affect teachers' perceptions and behaviors towards the washback effect were discussed. The study result enhances that the pressure of school curriculum and school policy is reinforced by the public assessment, which compels teacher to devote the extra amount of time in helping learns to prepare public examinations, notwithstanding finish the school syllabus of teaching. Although improvements have been discovered, the washback effect maintains superficial rather than substantial. As an important and influential agent, teachers have faced a set of pedagogical and ethical challenges during this process, whereas they have to tackle the pressure of school curriculum and policy. Thus, the findings of the study advocate that the occurrence of the washback effect relies on the attention of teachers – more attention should be paid to teachers' and students' attitudes and behaviors, which would influence the level of success of the washback effect.

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2nd presenter: Dr. Moonyoung Park (Department of Curriculum and Instruction, Chinese University of Hong Kong)

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**Moonyoung Park**, Ph.D., is an Assistant Professor in the Faculty of Education at the Chinese University of Hong Kong. His research has been focused on aviation English, computer-assisted language learning, task-based language teaching and assessment, and curriculum and instructional design.

## Investigating test practices and washback effects: implications for primary school English teachers in Hong Kong

2020 GETA Annual Conference  
Ms. Jiayi Min (Chinese University of Hong Kong)  
Dr. Moonyoung Park (Chinese University of Hong Kong)



## Background: Hong Kong assessment system

- Hong Kong assessment system: **exam-oriented**, **overarching paradigm of high-stake exams** (e.g. TSA, HKDSE) (Hui, 2012; Chang, 2018);
- **The role of school: a selection device** in Hong Kong education system (Biggs, 1992), what will be taught and learnt **depends on what will be tested** (Biggs, 1996);
- **Territory-wide System Assessment (TSA)**: launched in 2004, much **pressure** are brought than benefits, the effects of exam are strong (Yu, Kennedy, Fok and Chan, 2006);

## Background: Hong Kong assessment system (cont.)

- **Teachers' role (ideally): the major agents to foster positive effects of exams**; their reactions to the change of exam reflect their **perceptions towards the exam** and the magnitude of washback effect;
- **Teachers' pressure (in reality): follow** the school teaching **syllabus**, devote their time to **helping learners prepare** for both **school exams and the TSA**.

## Background: Hong Kong assessment system (cont.)

- **Teachers' reaction: ?**
- **Teachers' voice: ?**

**In light of this, there is a gap between:**

**What are expected to do VS what is doing at school level**

## Introduction to this study

To address this gap, this study was conducted at a Hong Kong local primary school, which investigates **teachers' perception and behavioral changes towards the exam.**

- A case study at primary school level;
- Three teachers from the school;
- how the changes in school-based exams influence the curriculum design at the school level;
- the changes of exams that reflected the changes of teaching syllabus and teaching content.

## Literature review

- **Washback effects (Wall & Alderson, 1993: 41; Hughes, 2003; Tsagari, 2007):**
  - 'the impact of a test on teaching'; the extent that a test influences what teachers and learners do things;
  - the extent that a test influences what teachers and learners do things: 'they would not necessarily otherwise do because of the test';
  - positive & negative washback effects: whether the exam is in agreement with the purpose of the curriculum design and objectives.

## Research questions

- **Research Question 1:** What **teaching activities** were implemented to examination change?
- **Research Question 2:** What was the nature and scope of the washback effect on **teachers' perceptions** of various aspects of teaching towards the school exam?
- **Research Question 3:** What was the nature and scope of the washback effect on **teachers' behaviours** as a result of the school exam?

## Literature review

- **Validity Alderson & Wall, 1993; Hughes, 1993; Bailey, 1996):**
  - influence on teaching or learning, what and how teachers teach and learners learn, the rate and consequence of teaching and learning, the degree and depth of teaching and learning and the attitudes to teaching and learning

## Literature review

- English in Hong Kong (Chang, 2018; Morris, & Adamson, 2010; Chow & Hingman, 2004):
- a **unique and important role** in various degrees; **one of the principal language** in different areas (e.g. government, education, business, communication, media, tourism, etc.);

## Literature review

- Education in Hong Kong (Hui, 2012): **a means towards upwards social mobility** as well as **great reputation and wealth**;
- English curriculum in Hong Kong primary school (CDC, 2004):
  - **lay a good foundation in learning English**, paving the way for **independent and lifelong learning** and effective communication of knowledge, ideas, values, attitudes and experience;
  - **'reading to learn'** culture, developing 'generic skills, values and attitudes, and exposing to **rich learning experiences**, learner-centred and a task-based approach, creating a **language-rich environment**.

## Literature review

- English curriculum in Hong Kong primary school (Poon, 2009):
  - taught with **traditional grammar and structural approaches**; the **connection** between **classroom teaching** and **English in daily life** is very **tenuous**;
  - **little time** is left for carrying out **new approaches**;
  - lesson time is devoted to exam revision, which are largely based on **content in the textbook** and focus on **targeted language forms**;
  - **little interaction can be found** between teachers and students.

## Literature review

- The Territory-wide System Assessment (TSA) (EDB, 2014):
  - the function of **enhancing teaching and learning**;
  - **providing timely feedback** that can adjust teaching, **improve learning**, and **bring benefits** to students' **learning**;
  - brought **extra pressure** and **extensive practice**;
  - schools are facing **pressure to improve TSA results**;
  - students are **drilled for TSA practices**;

## Research context

- This study has investigated **how the changes in school-based exams influence the curriculum design at the school level**, which includes learning activities, school-based worksheets, as well as the content of the exam;
- Although some aspects of washback effects on teaching have been studied over the past two decades, **research from teachers' perspective at primary school level is modest**, especially when exam targeting skills are in line with TSA. It is believed that these issues are highly relevant to primary school teachers in Hong Kong.

## Methodology

- **A semi-structured interview:**
  - conducted with subject teachers to obtain preliminary data on teachers' reactions, perceptions and behaviours towards school-based exams;
  - 11 questions, around 30 minutes;
  - includes participants' teaching qualification and experiences, detailed information related to teachers' perceptions about exams; changes in teacher behaviour due to the school exams and classroom teaching

## Participants

	David	Chelsea (subject panel head)	Mona
Gender	Male	Female	Female
Age	57	27	25
Academic qualification	Bachelor of Education, English language	Double degree, Bachelor in English language and English literacy	Bachelor of Education, English language
Years of teaching	Primary school, 30 years (15 years in English);	Primary school, 3 years; secondary school, 2 years;	Primary school, 2 years
Class level	Regular class (which is considered as 'normal class')	Elite class (which is considered as 'normal class')	Small class

### Part One Basic information

- gender, age, academic qualification, years of teaching, taught levels

### Part Two Exam and changes

- In compared with last year, are the major changes that you have perceived in the school exam papers?
- (if any) What kind of extra work or pressure the school exam has put on you?
- (if any) Because of the exam, is there any changes in your teaching in the content?
- What are the learning strategies you would recommend to your students in the context of the school exam in this academic year?

### Part Three Teaching

- What is the medium of instruction you use when you teach English in the classroom?
- How is your teaching assessed in your school?
- When you are planning a lesson, what are the factors that you may concern?
- What activities and strategies you have involved in classroom?
- During the lesson, what are the factors that most influence your teaching?
- (if any) From your perspective, what are the most difficult aspects of teaching in the school exam in English subject?
- What are the differences between teaching in a normal classroom between teaching in a small-sized classroom? (question for teachers have small-sized teaching experience)
- As the English subject panel head, what are the concerns and motivations to make the decision to join the programme? What are the benefits for students and school in a long run? (question for the school English subject panel head)

## Findings

- Teachers' perceptions of changes in school examination;  
examination;
- Teachers' workload and pressure towards the change of school exams;
- The relationship between testing and teaching.

## Results & discussions

- Teachers' perceptions of changes in school examination

Noticeable modification are discovered in question types and language skills.

*The reading skills tested in the papers....And in the past... we just cite the questions but didn't look into the skills tested in those questions, so in this year, we try to separate the skills in each homework, and then in the exam, we will test all the skills that we taught throughout the year. (Mona)*

*And for the writing part... we focus more on writing, including writing dialogues in the correct tenses and giving advice. So, in the final exam paper, we changed a little bit. Originally we simply, we asked students to write a picture description story, but then it changed, the content, to be more similar to what we have done in the process writing. (Chelsea)*

## Results & discussions

- Teachers' perceptions of changes in school examination

Rationale behind the changes: improvements on public exam result.

*Well, to be honest, I think the principal got the say.... how the principal make the decision depends on public exam result. .... compares to the other schools in Hong Kong, so we found that from P3 TSA actually, they did a quite good job.... but then suddenly when it comes to P6 TSA, the curve drop obviously, for different skills, ....So, the principal is really eager to change this result. .... from reading to writing, because we want to make them to have a better result in the public exam later. So I can't really say is it a benefit for the students. For the school, obviously, it will be good, ....but for the students, it's kind of more challenging.(Chelsea)*

## Results & discussions

- Teachers' workload & pressure towards the change of school exams

Teachers' pressure & anxiety: Ss' exam result and Ss' number of failure.

*...so actually, we have pressure, because we need to have a good result, better results in the exam...school pressure, yeah....especially in English subject... (David)*

*...and that number is actually a number of students failed in your class, so that creates a tiny little pressure for me when I saw the number compared with the other classes and I'll find out, oh, my class has more students failed than other classes! (Chelsea)*

## Results & discussions

- The relationship between testing and teaching

Teachers' awareness of various factors that affect students' results,

....they do not have **enough time** to finish the paper, because they cannot, ar, **allocate** some, some time for writing, some time for reading, yea. Many of them always focus on only one and two parts, and in the end, when they do the writing, they do not have **enough time** to do it. (David)

allocation of time

..It makes sense that you will have more longer words in their textbook. So they will find **more difficult** to remember the **spelling of the words**. It seems very hard for them, because they didn't know how to **chop off the syllables**. (Chelsea)

vocabulary

## Results & discussions

- The relationship between testing and teaching

Teachers' awareness of various factors that affect students' results,

.... I think reading is the most difficult thing, because it's very abstract, well sometimes they know how to **tackle that problem**, that question, but then if the text is changed, then suddenly they just forgot everything. (Chelsea)

reading: apply what have learnt into practice

..And for most of the students in this school, I think they are **lack reading skills** because they don't really know and understand the meaning, this is the very basic, to solve the questions. And then, if they don't understand, they cannot use any skills they learnt from the lesson. . (Mona)

lack reading skills

## Results & discussions

- The relationship between testing and teaching

Teachers' awareness of various factors that affect students' results,

I also need to **connect their previous learning with new content**, of course, ar, if I can, I usually **draw on students' daily life experiences**. (David)

connect with 5s' daily life

.... there is one chapter talking about food, things that you can buy in the supermarket. And that's why we have the supermarket promotion, and we also got the, ar, inspector from the consumer council, so something like that, it will be **related to the grammar item I want to teach**, and students can **make use of the sentence pattern**....I usually use **e-Learning**... they cannot focus for a long time, so if I let them do something on their iPads, they will focus more... So most of the time I will use e-Learning with them. And they enjoy it very much in the lesson. (Chelsea)

attention seeking: e-Learning

## Results & discussions

- The relationship between testing and teaching

Teachers' awareness of various factors that affect students' results,

Last year, we got **fifty minutes** for one lesson...for a double lesson in English, we got one hundred minutes....and that will be **enough**... But this year, we just have **forty-five minutes**, ah so, actually it's just five minutes less, but it seems like, it's shortened... I will not shorten them (the activities), but I will chop it out, into different procedures. Because if I shorten them, it means that they have less time to have the practice, but I think I need that. So I will chop out into different pieces,... I think we all have to **sacrifice**. Well, so, going back to the exam, because of the paper, so we will spend more time on drilling that grammar, which means that, **something less important**, something would not be tested in the exam, then you'll just **skip that**, or you will **cut them**. (Chelsea)

time are located to exam prioritized items

## Results & discussions

- The relationship between testing and teaching

Teachers' awareness of various factors that affect students' results,

*The first very big differences are the learning attitude. So last year for my normal class, they are really, ar, demotivated, yes, no motivation... because ar, they just kept getting low marks since they were small.... because they just don't do revision if I don't push them to do it, and then, even if I force them, like pre-dictation, they will ask me, why should I do the pre-dictation? Is it meaningful? I think it's meaningless! .... for this year, their learning attitudes are much better. They are very willing to answer my questions... And then, another thing is, the differences will be their learning difficulties. Because for the normal class, they are just normal students, they don't have disabilities, they are just too lazy. (Mona)*

demotivated learning attitude  
discourages students' learning

## Conclusion

- More attention should be paid to **teachers and students' attitudes and behaviours**, which would influence the level of success of washback effect;
- It is impossible to rely on teachers' effort to reverse the contemporary situation, unless **more support** is given;
- Students' **foundation knowledge should be constructed and consolidated**;
- Further **teachers' professional training** is needed for sustainable improvement in the long run.

## Limitations

- Students' voices should be applied in further studies;
- **Unexpected school suspension leads to:**
  - lessons were replaced through online platform,
  - less support were offered;
  - Limit students' responses were received.

## Further inquires

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## **How the Local Context Mediates Motivations for Teaching English in Korean Primary Schools**

Ian Moodie

(Mokpo National University)

This study seeks to understand why Korean primary school teachers choose to teach English and how their motivations for teaching are influenced by education policy. Data comprise 20 narratives from primary school teachers (5 male and 15 female), looking at their reasons to become teachers and to teach English full-time. Contrasting with recent survey research, the study found that respondents' motivations were largely extrinsic, being drawn to the field for the working conditions and the status of teaching in Korea. The findings also suggested differing motivations between male and female teachers in the study: Female participants were widely motivated by the working conditions and status of the profession, but the males tended to choose teaching as a fallback career. Regarding English, although some teachers volunteered to teach it, about half were motivated by extrinsic factors, the most prominent of these being assigned to English because of how the teacher assignment and rotation system works. Although the study focused on English teachers, the implications apply across all primary school teaching assignments in Korea and reveal an area in need of further investigation, that is, to look into the impact of the teacher assignment and rotation system on teaching efficacy in Korean public schools.

Key words: motivations for teaching, teacher commitment, English language teaching, primary schools, grounded narrative inquiry, narrative frames.

**Ian Moodie** is an Associate Professor in the Department of English Education at Mokpo National University, South Korea. His research interests include occupational commitment and teacher cognition. His recent research has been published in *Language Teaching Research*, *Language Teaching, System*, *KEDI Journal of Educational Policy*, and the *Modern Language Journal*.

How the local context mediates motivations for teaching English in Korean primary schools

GETA International Conference 2020

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<https://www.kedi.re.kr/eng/kedi/bbs/B00000005/list.do?menuNo=200067>

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## Why Work?

My recent research interest!

### Motivations for Teaching

- Why do people want to become teachers?

### Occupational Commitment

- Why do people continue to work in a profession?
- Why do people continue in their current workplaces?

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## Why teach English?

I've been really curious about the following questions:

1. Why do people start teaching English?
2. Why do people continue (or stop) teaching English?

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## Career Motivations

Research on *motivations for teaching* shows that people choose teaching because of things like:

- positive experiences as learners
- wanting to make a difference in the lives of students
- lacking better career alternatives
- and so on...

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## Career Motivations

*Motivations for teaching* include:

- Intrinsic Factors
  - e.g. positive experiences as learners
- Altruistic Factors
  - e.g. wanting to make a difference in the lives of students
- External Factors
  - e.g. lacking better career alternatives

(Brookhart & Freeman, 1992)

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## Gap

Better understanding of motivation and commitment  
with in-service English teachers  
(Moodie & Feryok, 2015)

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## How do people become ELTs?



Primary School English Teachers (civil service)
<ul style="list-style-type: none"><li>• Major in elementary education at one of 12 Universities of Education, or, Ewha Women's University</li><li>• Pass application examination</li><li>• Volunteer to teach English and/or be designated by principal</li><li>• Take in-service English education (re)training</li></ul>



## Prior Studies: Why teach in Korea?

- Public School Teaching?
  - Status of teaching profession (Kim et al., 1998)
  - Social and legal status; working conditions (Kim, 2009, 2011)
- Primary School English Teaching?
  - Principals decided who taught English (Jung & Norton, 2002)
  - Continuance and normative commitments (Moodie & Feryok, 2015)



## Research Questions

- Why do people want to become public school teachers in Korea?
- Why do Korean teachers commit to teaching English in primary schools?



## Participants and Data Collection

### Data Set: Reflective Writing

### 20 Korean English Teachers

- 15 Female
- 5 Male
- (in Gyeongbuk Province)

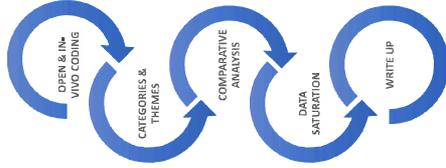
## Reflective Writing: Why I Became a Teacher

### Prompts

1. I remember the first time I thought about becoming a teacher. This was... (when)
2. The biggest reasons why I became a teacher include...
3. The people who influenced me most were...
4. They influenced me by...
5. I started teaching English because...
6. Before I started teaching English, I thought that being an English teacher was...
7. Now I think that being an English teacher is...
8. In the future, I hope to...



## Qualitative



## Analysis



## Findings: Motivations for Teaching

### Themes (from 20 stories)

Extrinsic motivation

- dominant theme (52 mentions)



### Excerpts

- The biggest reasons why I became a teacher include...
- *...a public school teacher is practically the only job where women don't have to worry about being discriminated because of gender (B.G.)*
- *...at that time our country was poor, so we can't think about future hope (H.Y.)*



## Findings: Motivations for Teaching

### Themes (from 20 stories)

Socialization (23 mentions)

- Influence of family members (14)
  - E.g. *hyodo* (filial piety)

Why?

B/c of Status and Working Conditions



### Excerpts

- The biggest reasons why I became a teacher were...
- *...actually my parents' pressure, especially my father who was a teacher for more than 40 years always told me since I was little kid that I should become a teacher and my mother pushed me to keep up my grading enough to go to the university of teachers. It was almost a threat ... but I tried my best to make them happy. (Miria)*



## Findings: Motivations for Teaching

### Themes (from 20 stories)

Intrinsic and altruistic motivations were uncommon:

- Desire to teach (6)
- Work with/influence children (2)

### Excerpts

- The biggest reasons why I became a teacher include...
- *...I like teaching and helping somebody...I always helped my friends and I felt happy about that. (M.H.)*



## Findings: Reasons for Teaching English



### Themes (from 20 stories)

**Intrinsic**

- Interest in English (6)

**Extrinsic**

- Assigned to teach English (6)

(Navigating a system)

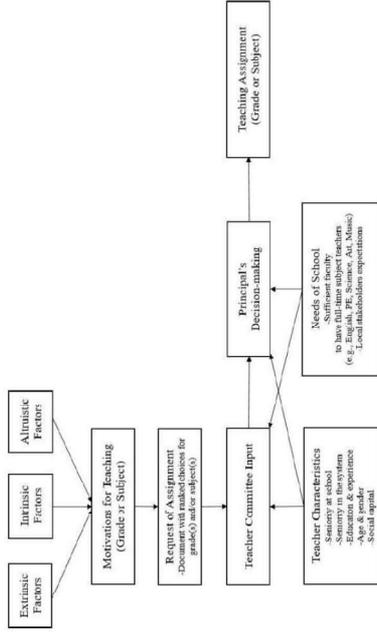
### Excerpts

- I started teaching English because...
  - ...I liked to study *English* and my *English ability was pretty good...so I wanted to teach English to my students.* (Y.S.)
  - ...there were *not many teachers who wanted to... Then I was younger than other teachers so I had to take it.* (D.W.)



## Teacher Assignment and Rotation System

(Moodie, 2019, p. 80)



## Case Study: Mia (16 Years teaching, 2 ELT) Why ELT?



Participant	Reasons	Commitment Mindset
Mia's 1st year ELT	Wanted to be recharged More flexible schedule than HRT Believed ELT is easy Thought less duties than HRT	Affective (to HRT) Continuance Continuance Continuance
Mia's return to HRT	Too many extra duties Difficulties with behavior/language use	Continuance (to HRT) Continuance (to HRT)
Mia's 2nd year ELT (after transferring)	Better than sixth grade HRT	Continuance
After study Mia continued ELT	Better than sixth grade HRT	Continuance



## Discussion & Conclusion



### The Problem of ELT Turnover

Common theme:

- Navigating Teacher Assignment and Rotation System (2015)
  - Continuance calculations (see also Moodie & Feryok, 2015)
  - Principal decision-making (cf. Jung & Norton, 2002)
  - Paucity of affective mindsets to ELT

Implication:

- System Induces ELT Turnover, not Commitment
  - Turnover is the norm, not the exception.
  - New teachers deal with old problems.
  - Commitments to ELT are short-term.
  - With turnover, expertise is lost to the system and efficacy suffers.

(THE END!)



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# **The Effectiveness of Phonological Awareness and Phonics Instruction for Word and Pseudo Word Reading of English as an L2: A Quantitative Meta-analytic Review**

Dennis Murphy Odo  
(Pusan National University)

Despite considerable efforts made to understand the impact that instructional interventions have upon L2 reading development, we still lack a clear picture of the influence that PA and phonics instruction has upon reading in English as an L2. A search of the research literature published from 1990 to 2019 yielded 48 articles with 49 studies containing 4,163 participants in total. Effect sizes were recorded for the effect of various PA and phonics instructional interventions on word and pseudo word reading. Results demonstrated that L2 PA and phonics instruction has a moderate effect on L2 word reading and a large effect on pseudo word reading. Moderator analyses revealed effects of a number of moderators including testing method, type of PA/ phonics intervention, and context where the intervention occurred. Based upon these conclusions, policymakers and educators should provide beginning learners of English as an L2 with PA and phonics instruction that will enable to read, understand and enjoy English better as a result. As well, future research should strive to adhere to more stringent standards of excellence in educational research.

**Dennis Murphy Odo** is an associate professor of English Education at Pusan National University in South Korea where he teaches courses in second language acquisition and literacy instructional methods. He received his Ph.D. in Language and Literacy Education from The University of British Columbia (UBC). Prior to coming to Korea, he was an assistant professor of ESOL/ Reading education at Georgia State University. His main research interests are in second language literacy instruction and teacher education. In particular, he is interested in how language teachers and learners can leverage literacy and technology to support second language learning.

# The Effectiveness of Phonological Awareness and Phonics Instruction for Word and Pseudo Word Reading of English as an L2

Dennis Murphy Odo, PhD

Pusan National University

## Introduction

- Teaching English learners PA and phonics to decode unfamiliar printed text is a foundational step in fostering English reading ability.
- Phonics-related skills are vital to L2 language reading but they have traditionally been neglected due to an over emphasis on whole language principles of reading instruction (Birch2014).
- Several meta-analyses and literature reviews have been conducted on L2 literacy development, but none have focused on the specific role of PA and phonics instruction in developing English learners' L2 word decoding ability.

## Previous Research: meta-analyses

- One early meta-analysis of L2 studies lead to the cautious conclusion that explicit PA and phonics instruction benefits L2 learners (August & Shanahan, 2007). Did not specify what aspects of English reading ability PA/ phonics instruction improves making it difficult for educators to apply the results.
- Several meta-analyses within applied linguistics discovered that L1 writing system correlated with L2 decoding ability (Jeon & Yamashita, 2014; Melby-Lervåg & Lervåg, 2011) and reading comprehension (Jeon & Yamashita, 2014).
- Several reading interventions designed for L1 learners (e.g., Success for All) have been found to be effective (Adesope et al., 2011; Cheung & Slavin, 2012).

## Previous Research: systematic literature reviews

- L2 vocabulary and grammatical knowledge (Choi & Zhang, 2018), weak PA (Varghese, 2015), and L1 writing system (Han, 2015) influence English learners' decoding skill which can hinder their word recognition and comprehension.
- However, these deficiencies can be ameliorated by explicit instruction of word-level skills (Murphy & Unithiah, 2015).

## Previous Research: narrative literature reviews

- Literacy knowledge and skill have been found to transfer between the L1 and L2 so teachers should take ESL learners' L1 into account (Snyder et al., 2017) and adapt their PA/phonics instruction for L2 learners by focusing on problematic sounds that do not exist in these learners' L1 (Irujo, 2007).
- Systematic and explicit PA/phonics instruction can support English learners' decoding skill and word reading development (August et al., 2014; Irujo, 2007; Snyder et al., 2017) but this instruction must be based on L2 oral language practice and opportunities to read authentic L2 texts (August et al., 2014; Irujo, 2007).
- Reading programs (e.g., Jolly Phonics) originally designed for English L1 speakers also work with ELLs, especially if they address the unique challenges ELLs face that stem from L1-L2 differences (August et al., 2014).
- Differentiated instruction, teacher modeling, peer tutoring and plenty of practice to reinforce new material are important (August et al., 2014; Snyder et al., 2017).

## Limitations in the extant research literature

- Issues exist in these studies including problems with construct definition, operationalization, and measurement that create doubt regarding their legitimacy (Choi & Zhang, 2018; Han, 2015).
- Lack of intervention studies examining best practices for improving L2 literacy in more varied educational contexts (Murphy & Unthiah, 2015).

## Research Questions

- These reviews do not offer a complete analysis of the influence that PA and phonics instruction can have upon particular aspects of L2 reading such as differing impacts on reading real words versus pseudo words.
- This is regrettable given the widely-acknowledged importance of these word and pseudo word reading for both L1 and L2 reading (Williams, 2016).
- Research questions:
  - What are the effect sizes for L2 readers who have experienced L2 PA and/or phonics instruction on both their L2 word and pseudo word reading?
  - How do the study characteristics of each study influence effect size in L2 word and pseudo word reading?

## Methods: Literature search procedures

- A search of the research literature published from 1990 to 2019 yielded 45 articles with 46 studies containing 3,841 participants in total.
- ES were recorded for the effect of various PA and phonics instructional interventions on word and pseudo word reading.
- This meta-analysis synthesized results from empirical studies of PA and phonics instruction with ESL and EFL readers.

## Methods: Literature search procedures

- Online and manual bibliographical searches were carried out to locate both published research studies and unpublished dissertations. Online database searches performed using Academic Search Premier, Linguistic and Language Behavior Abstracts, Web of Science, ERIC, PsycINFO, Google Scholar, EBSCO, and Pro Quest Dissertation and Thesis.
- Search terms used: immigrant, ELL, ESOL, ESL, second language read\*, EFL/foreign language read\*, L2 read\*, second language literacy, foreign language literacy, and L2 literacy.
- Search terms cross-referenced with keywords: reading intervention, reading instruction, phonics, phonemic/phonological awareness, letter-sound knowledge, alphabet principle, decoding, letter knowledge, and word recognition.

## Methods: Inclusion and exclusion criteria

- **Participants**
  - ESL and EFL learners included, English L1 learners were excluded
  - Studies of students beyond 1MS age were excluded
  - Students with learning disabilities were excluded
- **Design**
  - Languages other than English were excluded
  - Other outcome variables (e.g., spelling) were excluded
  - Statistics including means, SD, N, p-values etc. to calculate effect size
  - Independent variables PA and/or phonics instruction and dependent variable was a measure of word or pseudo word reading
- **Intervention**
  - The intervention had to be based upon phonological awareness or phonics instruction
  - Interventions that focused upon other aspects of L2 reading such as fluency, vocabulary, or comprehension were excluded

## Methods: Coding of study characteristics and effect sizes

- **Author, title, year, type of publication and sample size recorded.**
- **Information about the study's participants (e.g., grade level) and study characteristics (e.g., research design) noted.**
- **Intervention characteristics (e.g., instructional approach)**
- **Instructional context separated into ESL (e.g., the US or the UK) and EFL (e.g., Korea or Russia).**
- **Duration of instruction in minutes.**

## Methods: Effect size extraction and data-analysis

- ES represents the magnitude of the influence of the PA/ phonics instructional intervention on L2 word and pseudo word reading.
- Studies with larger samples were weighted more heavily because the effect sizes from these studies are usually more precise (Card, 2015).
- Data were entered into the "Metafor" (Viechbauer, 2010) package in the R statistical programming language (R Core Team, 2013) to compute the overall mean effect sizes and perform the moderator analysis.

## Methods: Effect size extraction and data-analysis

- The “esc” (Lüdtke, 2019) package within R was also used to convert results from pre-post and posttest only studies into Hedge’s  $g$  for this analysis.
- Hedge’s  $g$  was selected as the effect size statistic in this analysis over Cohen’s  $d$  because several of the studies had relatively small sample sizes and Hedge’s  $g$  adds a correction factor for studies with small samples.
- A random effects model was used for the computing the mean effect size. Studies conducted by different researchers in various contexts calling into doubt the assumption that they share a common effect size. Aspiring to generalize to a wider range of populations (Borenstein et al., 2007).

## Methods: Potential publication bias and moderator analysis

- Results from the visual inspection of the funnel plots as well as both the Egger and Begg tests all demonstrated no evidence of serious publication bias.
- Visual inspection of a forest plot that was sorted according study precision indicated no strong relationship between the precision of the study and the effect size estimate which does not imply the presence of availability bias for studies.
- An inspection of the residuals suggests that none of the studies included in the analysis deviate excessively from the mean.
- A “leave-one-out” analysis showed that removing any study from the analysis would not result in substantial change in the overall outcome estimate. Therefore, the inclusion of all studies in the analysis was justified.

## Results: Word Reading

- A moderate and statistically significant mean effect size was identified for the effect of phonics instruction on L2 word reading skills:  $g=0.53$  ( $SE = 0.12$ ),  $CI\ 95\%=[0.27, 0.79]$ , and  $I^2(35)=4.17$ ,  $p < .001$ .
- A heterogeneity analysis yielded a result of  $Q(35) = 242.26$ ,  $p < .0001$  demonstrated statistically significant heterogeneity in effect sizes in the word reading studies.
- An  $I^2$  of 88.53% also indicated considerable variability among effect sizes in the sample. Therefore, moderator analysis was warranted.

## Results: Pseudoword Reading

- The mean effect size calculated for pseudo word reading was  $g=0.79$  ( $SE = 0.202$ ),  $CI\ 95\% = [0.37, 1.21]$ , and  $I^2(23)=3.92$ ,  $p < .0007$ .
- Result of  $Q(23)= 224.79$ ,  $p < .0001$  as well as an  $I^2$  statistic of 94.12% heterogeneity in the ES justified a moderator analysis.

## Results: Word Reading Moderators

Group	Moderator	$\beta$	k	SE	95% CI lower	95% CI upper	Q <sup>2</sup>
Study characteristics	Pretest-posttest CG	0.33	27	0.12	0.09	0.56	42.46*
	Pretest-posttest	0.75	5	0.27	0.31	1.79	
	Researcher-designed	1.68	4	0.32	1.05	2.31	
Intervention implementation	Standardized	0.71	18	0.17	0.35	1.07	9.27*
	Instructional approach	0.46	9	0.24	-0.03	0.95	8.57*
	PA/phonics	0.76	20	0.16	0.43	1.09	
Participant characteristics	Second language	-0.03	7	0.27	-0.59	0.52	
	Foreign language	0.26	19	0.16	-0.05	0.58	26.81*
	1-500 minutes	0.83	17	0.16	0.50	1.16	
Moderator	1-500 minutes	0.48	10	0.25	-0.02	0.98	14.81*
	501-1000	0.55	9	0.26	0.04	1.06	
	1001-2000	0.49	6	0.33	-0.14	1.13	
Type of L1 writing system	2001+	0.69	5	0.32	0.04	1.35	
	Alphabet	0.39	13	0.17	0.04	0.73	27.92*
	Alpha-syllab.	1.68	2	0.44	0.82	2.35	
Edstage	Logographic	0.83	2	0.15	0.49	1.19	
	Primary	0.43	23	0.15	0.10	0.75	7.53*
	Elementary	0.56	9	0.25	0.04	1.08	
	Mid. School	1.72	2	0.53	0.63	2.80	

1. Knapp and Hartung (2003) adjusted F ratio results are reported for the variables that have two categories (e.g., assessment type).

## Results: Pseudoword Reading Moderators

Group	Moderator	$\beta$	k	SE	95% CI lower	95% CI upper	Q <sup>2</sup>
Study characteristics	Pretest-posttest CG	0.60	16	0.25	0.07	1.13	5.78*
	Pretest-posttest	1.08	3	0.58	-0.14	2.30	
	Researcher-designed	1.51	4	0.53	0.40	2.62	
Intervention implementation	Standardized	0.58	9	0.34	-0.13	1.30	7.39*
	Instructional approach	0.96	14	0.27	0.38	1.54	
	PA/phonics	0.82	7	0.37	0.07	1.56	15.50*
Participant characteristics	Second language	0.83	6	0.40	0.04	1.61	
	Foreign language	0.90	10	0.31	0.18	1.41	
	1-500 minutes	0.90	18	0.23	0.44	1.35	16.54*
Moderator	1-500 minutes	0.51	5	0.43	-0.32	1.36	
	501-1000	0.26	8	0.16	-0.05	0.58	75.37*
	1001-2000	1.98	4	0.24	1.50	2.45	
Type of L1 writing system	2001+	0.16	3	0.24	-0.31	0.65	
	Alphabet	0.41	5	0.18	0.05	0.76	
	Alpha-syllab.	0.52	13	0.22	0.07	0.97	13.48*
Edstage	Logographic	0.77	1	0.83	-0.86	2.40	
	Primary	0.82	7	0.30	0.23	1.42	
	Elementary	0.17	17	0.23	-0.86	1.01	9.60*
	Mid. School	1.03	6	0.40	0.51	1.53	

2. Knapp and Hartung (2003) adjusted F ratio results are reported for the variables that have two categories (e.g., assessment type).

## Discussion

- L2 phonics instruction was found to be moderate for L2 word reading and large for pseudo word reading. These ES both generally are in accordance with results from other studies that PA/phonics instruction supports decoding skill development and word reading ability (August et al., 2014; August & Shanahan, 2007; A. C. Cheung & Slavin, 2012; Han, 2015; Irujo, 2007; Murphy & Unthiah, 2015).
- Moderator analyses pointed to some differences in ES for both word and pseudo word reading depending on the assessment type that was used in the study. Some previous researchers have voiced concerns about how L2 literacy related constructs have been defined, operationalized and measured in previous research (Choi & Zhang, 2018; Han, 2015).

## Discussion

- All approaches appeared to be more effective for pseudo word reading possibly because all approaches focus on teaching decoding skills and pseudo word reading relies more on decoding skills than real word reading.
- Learners who received their instruction in second language contexts showed a small mean effect on their L2 word reading while those taught in foreign language settings displayed a large mean effect size. Somewhat unexpectedly, the opposite was found for L2 pseudo word reading.
  - Maybe because EFL teachers encourage the practice of decoding pseudo words more than ESL teachers because they do not face the same pressing concerns as ESL teachers to prepare learners to read in their content classes.

## Discussion

- Previous meta-analyses of L2 reading instruction did not discuss the role that factors such as instructional context, and duration of instruction play in PA/phonics instruction and L2 word and pseudo word reading development. Given the somewhat counterintuitive findings presented here, additional investigation of these moderators appears warranted.
- PA/phonics instruction appears to support the development of pseudo word reading for learners from logographic L1 backgrounds more than those from alphabetic L1s. Previous research concurred that L1-L2 distance moderates L2 decoding performance (Jeon & Yamashita, 2014; Melby-Lervåg & Lervåg, 2011) and learners from alphabetic or non-alphabetic L1s perform differently on word recognition measures (Han, 2015).
- Literacy skills transfer between the L1 and L2 (Snyder et al., 2017), but teachers may still need to tailor their PA/phonics instruction to teach the specific phonemes that are absent from the learners' first language (Trujb, 2007).

## Discussion

- Policymakers should consider providing beginning learners of English as an L2 with phonics instruction. Likewise, reading teachers who are less knowledgeable about phonics instruction should seek training to teach phonics effectively.
- This meta-analysis has also exposed some possible issues with the current research base that suggest some caution when interpreting the results.
  - Potential concerns about quality in some of the studies. Missing information about the background learners characteristics of, experimental intervention, and assessments used.
  - Some studies were technically non-experimental because they did not include a control group.
  - Wide variety of assessments used makes it difficult to directly compare their results.
- Pointing out these weaknesses in the existing research does not necessarily negate the value of these investigations but we must strive to produce more carefully-designed research going forward.

## **Reorientation of Noticing and Output: A Case Study of Tracking a Teaching Object During an IELTS Consultation**

Eunseok Ro  
(Kangwon National University)

By grounding its analysis in the participants' observable conduct and displayed understanding, this case study takes an emic (participant-relevant) perspective and a praxeological (action-based) approach to analyze how consultation activities for second language (L2) learning evolve as social interaction. The study tracks how teaching objects (i.e., an object for the student to notice and potentially learn) emerge in interaction in situ (in context) and in vivo (as experienced) in the praxeological environment of IELTS consultations at a L2 speaking center and how students benefit from participating in them. The study's secondary focus is to reconceptualize the notion of 'noticing' and 'output'. This study aims to expand the understanding of noticing as a social practice and the theoretical and methodological scope of research on output by analyzing the dyadic interaction of a consultation activity with a specific analytical focus on a student's act of noticing when deploying a teaching object. In the examples in the data, the student does not in the first instance notice through her own production. Rather, she notices the target form that the tutor has guided them toward. In other words, the analysis shows how the student shows her noticing of linguistic problems and attention to target forms through the collaborative social orientation with the tutor.

**Eunseok Ro** is an Assistant Professor in the Division of Liberal Studies at Kangwon National University (KNU). He received his Ph.D. in Second Language Studies from University of Hawai'i in December 2017. He worked as an Assistant Professor in the Department of English at City University of Hong Kong before he joined KNU in April this year. His research articles have appeared in various scholarly journals including but not limited to Applied Linguistics, Modern Language Journal, TESOL Quarterly, Journal of Pragmatics, Linguistics and Education, and Journal of English for Academic Purposes. His research interests include conversation analysis for second language acquisition, interactional competence, institutional interaction, literacy as social practice, and L2 pedagogy.

# **The Relationships Among Chinese EFL Learners' Meta-cognitive Strategies, Working Memory Capacity, L2 Vocabulary Knowledge in L2 Reading Comprehension**

Wei Shen & Hyesook Park

(Northeast Electric Power University, Kunsan National University)

The purpose of the present study was to model the relationships among meta-cognitive strategies, working memory capacity (WMC), L2 vocabulary knowledge in L2 reading comprehension in the context of Chinese adult EFL learners. Specifically, this study formulated a comprehensive model of the relationships among meta-cognitive strategies, WMC, L2 vocabulary knowledge and L2 reading comprehension. Participants were 389 college students who enrolled in the required English class, aged from 19 to 21 years. A Questionnaire related to participants' meta-cognitive strategies was administered. Then a reading span test and a non-word repetition test were given to measure the executive working memory (EWM) and phonological working memory (PWM). In addition, two vocabulary tests were carried out to examine the depth and breadth of L2 vocabulary knowledge, and a reading comprehension test was to evaluate participants' L2 reading comprehension performance. Results of structural equation modeling (SEM) revealed that there was a positive relationship among participants' meta-cognitive strategy use, WMC, L2 vocabulary knowledge and L2 reading comprehension. Among the variables, L2 vocabulary knowledge and WMC were more correlated than others. Further, the result indicated that the highest independent predictor was found to be L2 vocabulary knowledge and it made a significant contribution to explaining the variance of L2 reading comprehension. It can be suggested that L2 vocabulary knowledge might be the more critical component of L2 reading comprehension for the Chinese intermediate EFL learners.

Key words: meta-cognitive strategies, working memory capacity, vocabulary knowledge, reading comprehension, Chinese EFL learners

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individual differences in reading comprehension, how the reading process is related to education, learning, and memory, and L2 research methods.

**Hyesook Park** is a professor at the department of English Language & Literature at Kunsan National University. She was a visiting professor at Michigan State University and at King's College in London. She earned her B.A., M.A., and Ph.D. at Korea University in Seoul. Her special research field is SLA and L2 writing teaching/development.

# The Relationships among Chinese EFL Learners' Meta-cognitive Strategies, Working Memory Capacity, L2 Vocabulary Knowledge in L2 Reading Comprehension

**Wei Shen**

*Northeast Electric Power University*

**Hyesook Park**

*Kunsan National University*

December 2020

## Reading Comprehension

### WORD RECOGNITION

- Phonological Awareness
- Decoding
- Sight word reading
- Fluency (Phrasing)

### EXECUTIVE PROCESSES

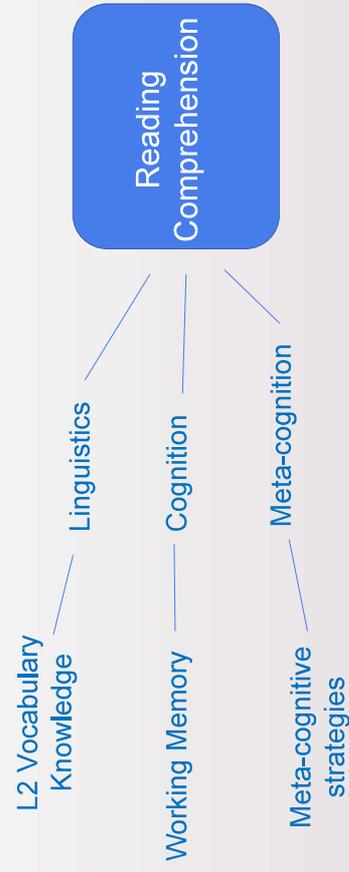
- Cognitive Strategies
- Meta-cognitive Strategies
- Working Memory

### LANGUAGE COMPREHENSION

- Background Knowledge
- Syntax Awareness
- Vocabulary Knowledge
- Text Structure

*From Deshler, Hock & Catts (2006)*

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## Metacognition

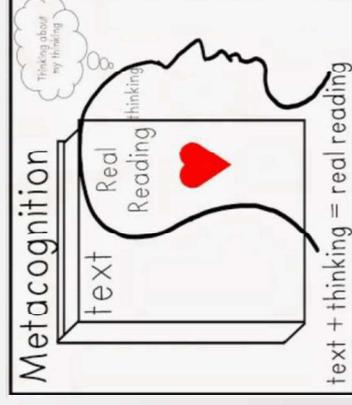
John Flavell, 1979

Thinking about thinking, or learning how to learn.

Modeling what, how, and why we are thinking.

What we are thinking is.

Most powerful predictor of learning.



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## Meta-cognitive Strategies

Activities that make readers aware of their thinking while reading.

Predicting/Inferring

Self Questioning

Monitoring/Clarifying

Evaluating

Summarizing

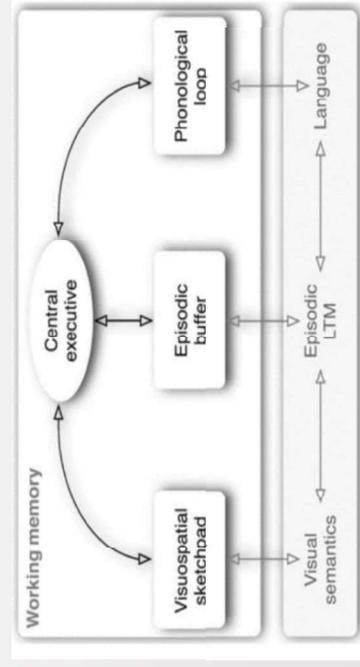
Visualizing



7

## Working Memory Capacity (WMC)

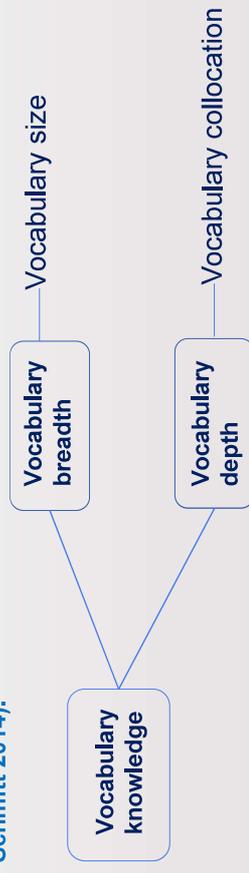
Baddeley's Component Model of Working Memory (2000)



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## L2 Vocabulary Knowledge

Vocabulary knowledge is multi-dimensional and entails different aspects of knowledge about knowing a word (Chapelle 1994; Henriksen 1999; Milton & Fitzpatrick 2014; Nagy & Scott 2000; Nation 1990, 2001; Schmitt 2014).



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## Literature Review

- Thailand
- Japan
- Korea
- Russia
- Indonesia
- Spanish
- Tehran
- Saudi



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## Chinese EFL Learners' L2 Reading Comprehension



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## Significance of this study

- In Chinese context
- SEM
- Pedagogical implications

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## Research Questions

1. What is the **general condition** of Chinese EFL learners' meta-cognitive strategies, WMC and L2 vocabulary knowledge in L2 reading comprehension?
2. What is the **structural relationship** among meta-cognitive strategies, WMC, L2 vocabulary knowledge and L2 reading comprehension?

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## Participants

	Number	Percentage
Gender	Male	69.41%
	Female	30.59%
Grade	2nd	100%
Major	Natural science	69.67%
	Social science	30.33%
Age	18-20	37.28%
	21-23	55.27%
	24-27	7.45%

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## Instruments

- (1) a reading test
- (2) a reading strategy questionnaire
- (3) a vocabulary breadth test
- (4) a vocabulary depth test
- (5) a reading span task
- (6) a non-word repetition task

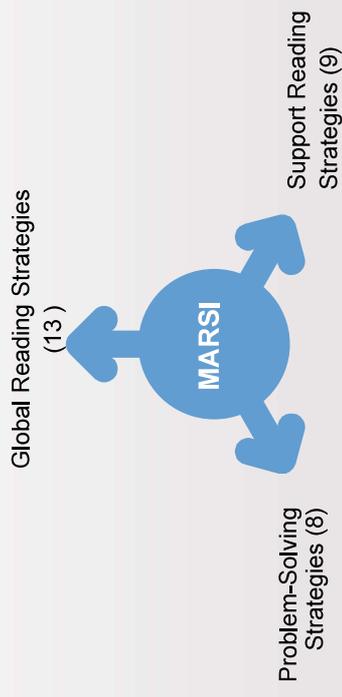
16

## Reading Comprehension Test

- three retired versions of TOEFL Reading Comprehension
- three passages
- 30 comprehension questions

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## Meta-cognitive Awareness Reading Strategy Inventory (MARSI)



Mokhtari & Reichard, 2004

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## Reading Span Test

- Waters & Caplan's (1996), modified version of Daneman & Carpenter (1980)
- Storage and processing functions of working memory
- 70 sentences
- Sentence groups of 2, 3, 4, 5, and 6 sentences

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## Non-word Repetition Test

- Dollaghan & Campbell, 1998
- 16 non-words
- in one, two, three and four syllables

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## Vocabulary Size Test

- Nation & Beglar, 2007
- 140 items
- first 1,000 to the 14th 1,000 word families of English
- based on the British National Corpus (BNC)

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## Word Associate Test

- Read, 1993
- 40 target words
- a stimulus word (an adjective) and two boxes of words
- four correct answers

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## Contents

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## Results & Discussion

General condition of Meta-cognitive Strategies, WMC and L2 Vocabulary knowledge

Variable	M	Median	SD	Min	Max
MCS	3.42	3.00	.71	1.00	5.00
EWM	52.42	53.00	11.26	18.00	70.00
PWM	12.30	13.00	2.45	5.00	16.00
VOCD	65.21	64.00	32.31	16.00	155.00
VOCB	5101.39	4900.00	3826.23	3000.00	14000.00
RT	17.96	16.00	4.77	4.00	30.00

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## Results & Discussion

- 1 General condition of Meta-cognitive Strategies, WMC and L2 Vocabulary knowledge

Chen & Liu, 2020,  
Laufer & Ravenhorst-Kalovski, 2010  
Qian, 1999

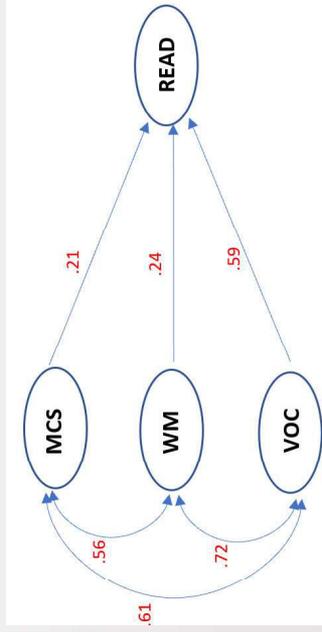
--the threshold level of **6,000 vocabulary size**

Chen, Chen, & Liu, Yongcan. (2020). The role of vocabulary breadth and depth in IELTS academic reading tests. *Reading in a Foreign Language*, 32(1), 1-27.  
Laufer, Batta, & Ravenhorst-Kalovski, Geke C. (2010). Lexical threshold revisited: Lexical text coverage, learners' vocabulary size and reading comprehension. *Reading in a Foreign Language*, 22(1), 15-30.  
Qian, David D. (1999). Assessing the roles of depth and breadth of vocabulary knowledge in reading comprehension. *Canadian Modern Language Review*, 56(2), 282-308.

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## Results & Discussion

- 2 Structural relationship among Meta-cognitive Strategies, WMC, L2 Vocabulary knowledge and Reading Comprehension



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## Results & Discussion

- 2 Structural relationship among Meta-cognitive Strategies, WMC, L2 Vocabulary knowledge and Reading Comprehension

Fit indices	Criterion	Fit statistics of MCS-VOC-WM-READ model
CMIN/DF	≤ 5.00	.99
p	> .05	.46
GFI	≥ .09	.99
AGFI	≥ .09	.97
CFI	≥ .09	1.00
RMSEA	≤ .08	.00
SRMR	≤ .05	.02

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- 01 Introduction
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## Summary of data analysis

- The general condition of variables was in **intermediate level**.
- **Meta-cognitive strategies, WMC, L2 Vocabulary knowledge** had **significant effects** on reading comprehension.
- **L2 vocabulary knowledge** had the most significant prediction (.59).
- **WMC and L2 Vocabulary knowledge** were most closely correlated to each other (.72).
- The findings are consistent with previous research (e.g. (Bowey, 1994; Danielle et al., 2017; Lipk & Siegel, 2007; Peng et al., 2018; Wang et al., 2002)

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## Pedagogical Implications

- Chunking
- Lexical and grammatical collocation
- High-level schema activation
- Background knowledge schema information
- Mind maps
- Always ask *why, how, and if*
- Use SQ5R for reading comprehension
- Think-aloud
- Setting models

How to think  
How to learn

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THANK YOU FOR YOUR ATTENTION!

# **The Effects of Elaborated and Simplified Texts on Reading Comprehension**

Takaaki Takeuchi  
(Aichi University of Education)

This study investigates the influence of cognitive ability on EFL reading comprehension (development). 138 EFL students participated with data collected at a week interval. At Time 1, the participants were either 18 or 19 years old. Reading comprehension measures targeted comprehension using multiple comprehension tests were conducted. At Time 2, the researcher randomly presented 14 reading passages to 138 Japanese college students in one of the three forms: (a) baseline, (b) simplified, or (c) elaborated. The texts cover a wide range of genres: biology, economics, science, psychology, and daily issues. Comprehension, assessed by 43 multiple-choice test items was highest among learners reading the simplified version, and significantly different from those reading the elaborated and baseline version. The type of modification interacted significantly with the kind of test item used for assessing comprehension - specific, general, or inference - showing there is a significant difference in specific test-item, but not in both general and inference test-item. It suggests that different kinds of text facilitate different levels of comprehension.

**Takaaki Takeuchi** is a professor in the Department of Foreign Language Education at Aichi University of Education, Japan. His interests are in instructed second language acquisition and English education in Japan. His recent papers focus on corrective feedback and classroom observation, and how language is learned through motivation and instruction.

# The effects of elaborated and simplified texts on reading comprehension

Aichi University of Education, JAPAN  
Takaaki TAKEUCHI



## Contents

- Introduction
- Previous Studies
- Method
- Results
- Discussion



## Introduction

- Reading a second language text is increasingly essential. For instance, in classroom instruction, comprehension has been a subject of extensive research as one of the major constructs, alongside reading speed. Although comprehension in an L2 can be interpreted differently in various contexts, the study here focused on different types of text comprehension.



L2 reading comprehension has been previously examined using the objective fact-finding item as well as the entrance exam context. However, L2 reading comprehension is multifaceted. For instance, different types of texts may develop different types of comprehension, and it can involve multiple facets such as different types of questions and interactive reading behavior. In the current study, English as foreign language learners engaged different text levels in their regular classes. The goal of this intervention was thus to examine the development of reading comprehension.



## Previous Studies

- Carrell (1988) interactive between readers and texts
- Yano, Long, Ross (1994) Reading comprehension between the simplified and elaborated texts
- RESULTS : simplified > elaborated , not significant level interaction with the kind of texts
- Oh (2001) Two types of input modification and EFL reading comprehension: simplification versus elaboration.
- RESULTS: elaborated > simplified,  $p < .05$
- rich information may improve deeper understanding



- Kim (2006) The effects of input elaboration on vocabulary acquisition through reading
- Bold letter would enhance both attention and meaning, then improve comprehension.



## The summary of previous studies

- Conflict results can be seen about comprehension rates; simplified texts are better in Yano et al. (1994), whereas elaborated texts are better in Oh (2001).
- Question type effects vary in the previous studies.
- The range of text type of genres are limited, such as social studies, science.
- This study will focus on comprehension rate among simplified and elaborated text within a variety of genres.



## Research Questions

1. Are there any differences among the readers of simplified version, baseline version, and elaborated version?
2. Are there any differences between the readers of formal texts and informal texts?
3. Are there any relationship between the question type and three different texts?



## Method

- 1) 3 types of Reading materials; **S**implified, **E**laborated, **B**aseline  
3 types of Reading Questions; **G**eneral, **S**pecific, **I**nference
- 2) TOEIC

Analysis is based on **ANCOVA**



## Participants & Reading Materials

Participants: 138 students in a national university in Japan.

Materials: Reading ( 7 formal texts about variety of genres, 7 casual texts about daily life issues in letters )  
14 **B**aseline, 14 **S**implified , 14 **E**laborated,

	Baseline	Simplified	Elaborated
Flesch-Kincaide (words per grade level)	10.0	6.9	13.7
Complexity (sentence)	22.7	14.7	34.0
Length (Total length)	4023	4174	6223

## Reading Question type

- Question type:
  - **G**eneral questions ( n= 7)
  - **S**pecific questions ( n= 13)
  - **I**nference questions ( n = 12)
- Those questions are checked and examined among 4 native speakers. (Cronbach  $\alpha = 1.00$ )



## Descriptive data of reading comprehension

	<i>N</i>	<i>M</i>	<i>SD</i>
Baseline	47	13.11	5.142
Elaborated	46	11.00	3.801
Simplified	45	15.71	5.911



## Results: Reading Type ANCOVA

Source	SS	df	MS	F	P	$\eta^2$
TOEIC	736.86	1	736.86	37.71	.00	.315
Type	156.59	2	78.29	4.00	.02	.045
Residual error	2578.81	132	19.54			
TOTAL	2815.16	138				

### Post-hoc analysis: Bonferroni Correction

Simple ( $M=15.71$ ) > Baseline ( $M=13.11$ )  $p=.02$

Simple ( $M=15.71$ ) > Elaborate ( $M=11.00$ )  $p=.00$

## Descriptive Data: Question Items

General	N	M	SD
Baseline	47	1.55	1.138
Elaborated	46	1.63	1.162
Simplified	45	1.60	1.232
Specific question	N	M	SD
Baseline	47	4.72	1.802
Elaborated	46	4.02	2.206
Simplified	45	5.80	2.282
Inference question	N	M	SD
Baseline	47	3.83	1.926
Elaborated	46	3.07	1.652
Simplified	45	4.73	2.005

## Results: ANCOVA, General Question

Source	SS	df	MS	F	P	$\eta^2$
TOEIC	1.165	1	1.165	0.848	.359	.0320
Type	4.904	2	2.452	1.784	.172	.02616
Residual error	181.37	132	1.374			
Total	538.00	138				

## Results: ANCOVA, Specific Question

Source	SS	df	MS	F	P	$\eta^2$
TOEIC	108.383	1	108.383	29.387	.00	.258
Type	26.639	2	13.319	3.667	.028	.043
Residual error	479.495	132	3.633			
Total	3904.00	138				

Bonferroni: Simplified > elaborated,  $p=.00$   
Simplified > baseline,  $p=.03$

Results: ANCOVA, Inference Question

Source	SS	df	MS	F	P	$\eta^2$
TOEIC	66.371	1	66.371	21.938	.00	.223
Type	8.418	2	4.209	1.391	.252	.0177
Residual error	399.36	132	3.025			
Total	2600	138				



Descriptive data: Letter story(informal) & News(formal)

Letter	N	M	SD
Baseline	47	7.133	.334
Elaborated	46	6.692	.339
Simplified	45	8.471	.342

NEWS	N	M	SD
Baseline	47	5.919	.524
Elaborated	46	4.396	.531
Simplified	45	7.097	.536



ANCOVA Letter Story 15questions

Source	SS	df	MS	F	P	$\eta^2$
TOEIC	.924	2	.462	.088	.916	.313
Class	264.822	3	98.274	16.839	.000	.276
Residual Error	691.973	132	5.242			
Total	8659,000	138				

Post-hoc test : Bonferroni

Simple > Baseline  $p=.019$   
 Simple > Elaborate  $p=.001$



ANCOVA: News Articles 28 questions

Source	SS	df	MS	F	P	$\eta^2$
TOEIC	53.280	2	26.640	2.066	.131	.149
Class	196.224	3	65.408	5.072	.002	.100
Residual Error	1702.119	132	12.895			
Total	6760,000	138				

Post hoc test: Bonferroni

Simple > Elaborated  $p=.001$



## Discussion

- **RQ1: Reading type**
- Correct rate is higher in simplified texts than others.
- As simplified texts have small number of vocabularies, easier expressions, the correct rate is higher than others.
- For ESL learners, no difference between baseline and elaborated. Compared with the previous studies, this study supports Yano et al. (1994). The participants' proficiency level is more suitable for simplified texts than others, so there is no difference between elaborated and baseline texts.



## • RQ2: Formal text vs Informal text

- News article (**Formal text**)  $F(3,132)=65.408, p=.002$
- Simple > Elaborated  $p=.001$
- Letter story (**Informal text**)  $F(3,132)=16.839, p=.000$
- Simple > Baseline  $p=.019$ , Simple > Elaborate  $p=.001$
- Participants are more accustomed to reading formal texts than informal texts; as there is not significant difference between simple and baseline in formal texts. In this study, there is not a huge difference between formal and informal texts.



## • RQ3: Question type vs different level of texts

- **General** question: no significance among three texts.
- the mean score is Lab (1.63), Simple(1.60), Baseline (1.55)
- **Specific** question:  $F(2,132)=3.667, p=.028$
- Simple > Base,  $p=.019$ , Simple > Elaborate,  $p=.001$
- **Inference** question: no significance  $S(4.73)$ ,  $B(3.83)$ ,  $E(3.07)$
- The specific type of questions, there are clear expressions/signals in text, so learners have more advantage to find out simplified text. On the other hand, learners have to connect text and contents in general text, so there is no difference between them. In inference contexts, learners do not have enough cognitive load to fill in a gap between inference issues and text. It may be a burden for the inference question type.



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## Acknowledgements

- Text materials and reading questions are based on Jaemyung Goo and Takeuchi's collaborated work.



## 인공지능과 영어학습: 정책 및 기존 연구 분석을 중심으로

고은혜  
(제주대학교)

When most people hear the term ‘artificial intelligence’ or ‘AI’, the first thing that they usually think of would be AlphaGo, a computer program developed by DeepMind Technologies that plays the board game go. The term “artificial intelligence” was coined in the 1950s by scientists attempting to create a machine that could perform the functions of “thinking” that humans are capable of. Today, this technology is not just something computer scientists and tech aficionados dabble with. Most of us use AI in our daily lives without really thinking or knowing about it. Therefore, the article reviews how AI have an impact on language learning, especially English learning in a practical way. First it studies how each international and national institution defines AI and plans to apply it to English learning. Also, it takes a look at previous studies on AI and English learning focusing on Chatbot, a software application used to conduct an on-line chat conversation via text or text-to-speech, in lieu of providing direct contact with a live human agent. Finally, the study summarizes what these studies show in common and find their implications.

Keyword : Artificial Intelligence(AI), Language learning, English Learning, Chatbot

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# ARTIFICIAL INTELLIGENCE & ENGLISH LEARNING

## 인공지능과 영어학습 : 정책 및 기준 연구 분석을 중심으로

EUNHYE KOH  
 JEJU NATIONAL UNIVERSITY



# CONTENTS

- Definition of Artificial Intelligence
- Application of AI
- Importance of AI in Education and English Learning
- Previous Research on English Learning with AI Chatbot
- English Learning Tools using AI Chatbot
- Implications



# ARTIFICIAL INTELLIGENCE



# What is Artificial Intelligence (AI)?

<b>Thinking Humanity</b> The exciting new effort to make computers think... machines with minds, in the full and literal sense. (Haugeland, 1985) The automation of activities that we associate with human thinking, activities such as decision making, problem-solving, learning... (Bellman, 1978)	<b>Thinking Rationality</b> The study of mental faculties through the use of computational models. (Charniak & Mcdermont, 1985) The study of the computations that make it possible to perceive, reason, and act. (Winston, 1992)
<b>Acting Humanity</b> The art of creating machines that perform functions that require intelligence when performed by people. (Kurzweil, 1990) The study of how to make computers do things at which, at the moment, people are better. (Rich & Knight, 1991)	<b>Acting Rationality</b> Computational Intelligence is the study of the design of intelligent agents. (Poole et al., 1998) AI... is concerned with intelligent behavior in artifacts. (Nilsson, 1998)

UNESCO(2019) Artificial Intelligence in Education: Challenges and Opportunities for Sustainable Development



# APPLICATIONS OF AI

의료	
금융	
스마트홈	
교통	
제조	
도시관리	

출처: 중앙정보기술인재개발원·중앙정보처리학원

# UNESCO(2019) ARTIFICIAL INTELLIGENCE IN EDUCATION: CHALLENGES AND OPPORTUNITIES FOR SUSTAINABLE DEVELOPMENT

- AI can help advance **collaborative learning**. One of the most revolutionary aspects of computer-supported collaborative learning is found in situations where **learners are not physically in the same location**. It provides students variable choices insofar as **when and where** they wish to study.
- AI can help **personalize learning** through various ways.
- AI can help create a better **professional environment** for teachers to work more on students with difficulties.
- AI can help **map each student's individual learning plans and trajectories**, their strengths and weaknesses, subjects and learning preferences and activities.
- AI can personalize learning and **improve opportunities** for students with the help of their teachers and schools.



# 서울시 교육청 (2018) 영어학습플랫폼 구축 기획연구

- 공교육 내 의사소통중심 영어노출시간 확대 필요
- 영어 의사소통경험 확대 필요
- 인공지능의 많고 듣고 쓰는 기능을 영어교육에서 활용할 필요
- 영어교사가 인공지능을 교수학습의 도구로 사용할 수 있도록 지원하는 기술환경이 필요

영어 학습플랫폼이란? 인공지능 기술을 활용해 학생 개개인에 맞는 다양한 영어 학습 콘텐츠를 제공하고 선생님이 학습상황을 관리할 수 있는 시스템



# 교육부(2019) 초등학교 영어교육 내실화 계획

- 학생 ↔ AI
  - AI ↔ 학생
  - AI - 교사
- ◆ 학생 수준에 따라 교과서 기반의 파닉스·문어·문장·대화연습  
 ✦ 발음 교정·자유주제 대화연습
  - ◆ 학습자 데이터 분석에 따라 수준별 맞춤형 연습 반복 제공  
 ◆ 학습자 숙유과 흥미에 맞는 영어 읽기·쓰기 콘텐츠 추천
  - ✦ 학습자 맞춤형 속제 생성 및 학습관리 기능  
 ✦ 교사가 수업 중 사용할 학습콘텐츠 직접 구성·편집 가능



## AI 학습 도구의 특징 및 장점

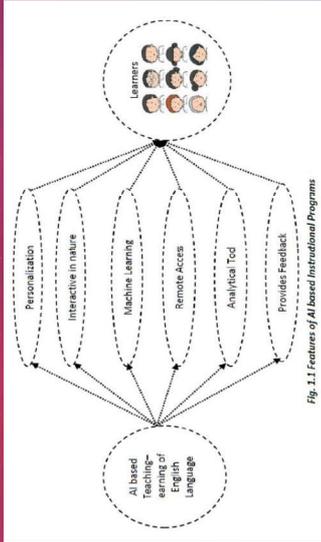


Fig. 1.1 Features of AI based Instructional Programs

Dr. SANDIP P. GAWATE (2019) ARTIFICIAL INTELLIGENCE (AI) BASED INSTRUCTIONAL PROGRAMS IN TEACHING - LEARNING OF ENGLISH LANGUAGE

1. User Friendly Need Based Instructional Programs
2. Qualitative Contents
3. Additional Support System to Teachers and Students
4. Quick Feedback System
5. Changing the Role of Teacher as a guide and director
6. Worldwide Access
7. Personalization of Teaching- learning of English

## 기존연구

챗봇(chatbot)에 중점을 둔 연구 多

- 김혜영 (2019) 영어교과 보조 도구로서의 AI 챗봇 분석 연구
- 김인식, 김봉규 (2020) 인공지능형 대화형 챗봇 현황과 영어교육용 챗봇 개발 방안
- 윤여범, 박미애 (2020) 인공지능과 초등영어교육: 챗봇의 현황과 발전 방향을 중심으로
- 양혜진 외(2019) 인공지능 음성챗봇기반 초등학교 영어 말하기 수업 연구
- 이동환(2019) 초등영어교과서를 활용한 영어말하기 학습용 챗봇 제작 방안

챗봇이란? 문자 또는 음성으로 대화하는 기능이 있는 컴퓨터 프로그램 또는 인공지능

출처 : 한국정보통신기술협회

## 김혜영(2019) 영어교과 보조 도구로서의 AI 챗봇 분석 연구

- 인공지능 비서 봇(AI assistant bot) 중 Amazon 사의 Alexa와 Google 사의 Google assistant를 이용하여 두 챗봇과 대화자 사이의 대화수준과 상호작용 능력을 영어학습 관점에서 비교분석
- 두 가지 AI는 현재 상태에서도 우리나라 영어 수업에서 활용 가능한 도구로 판단됨
  - 근거 1 : 교육과정과 연계된 과업을 수행하는 데 있어 86% 이상의 높은 성공률
  - 근거 2 : 주제나 내용 면에서도 우리나라 학습자에게 적합한 수준의 정보를 제시한 것으로 분석됨 (AI 구사 이후 97% 초·중·고 교육과정의 권장어휘 수준에 포함)

## 김혜영(2019) 영어교과 보조 도구로서의 AI 챗봇 분석 연구

첫째, 외국어 학습, 외국어 교육과정에 근거한 과업을 수행할 수 있는 목적형 챗봇 프로그램 개발 필요  
 둘째, 외국어 학습자 코퍼스 구축 및 분석을 통해 외국어 학습자의 발화 특성을 도출하고 이를 챗봇 개발에 반영할 필요

## 윤여범, 박미애(2020) 인공지능과 초등영어교육: 챗봇의 현황과 발전 방향을 중심으로

- 음성인식 기술의 향상 및 초등영어교육의 특성 고려라는 두 가지 측면에서 논의
  - 음성인식의 측면에서는 한국어인 영어 발음에서 발생하는 오류에 대한 비메이터를 축적하여 초등학교 중학위권 학습자의 다소 부정확한 영어 발음도 알아들을 수 있도록 음성인식 능력을 향상시킬 필요
  - 초등영어교육의 특성 고려 측면에서는 기존 챗봇의 난이도를 낮추어야 하며, 본격적인 대화에 앞서 충분한 연습 기회를 제공해야 하고, 초등학생의 흥미 유지와 다양한 방식의 상호작용이 가능하도록 해야 함



## 양혜진 외(2019) 인공지능 음성챗봇기반 초등학교 영어 말하기 수업 연구

- '음성챗봇을 활용한 모둠 말하기 과제 활동에서 학습자와 챗봇과의 대화의 특성은 어떠한가?'
  - 적극적 대화참여
- '음성챗봇기반 말하기 활동에서 나타난 개선사항은 무엇인가?'
  - 챗봇의 대화 길이와 속도, 표현 등에 대한 조정 필요
- '음성챗봇과 모둠 과제 활동에 대한 참여 학생들의 인식은 어떠한가?'
  - 학생들은 챗봇과의 대화를 재미있는 놀이로 생각
  - 챗봇과 상호작용을 통하여 자신의 말하기능력이 향상될 것이라는 인식



## 이동한(2019) 초등영어교과서를 활용한 영어말하기 학습용 챗봇 제작 방안

- 외국어 학습을 위한 챗봇 분류
  - 1) 단순 응답형
    - (1) Alexa
  - 아마존에서 개발한 인공지능 플랫폼
  - 검색엔진과 접속하여 사용자가 원하는 다양한 정보를 제공
  - (2) Google Assistant
  - Google에서 개발한 인공지능 가상 비서
  - 사용자와 간단한 대화를 수행하며 사용자의 요청에 따른 정보 검색 등의 음성 비서 역할 뿐 아니라 상호작용을 통한 대화 상대자의 역할까지 기능을 확장



## 이동한(2019) 초등영어교과서를 활용한 영어말하기 학습용 챗봇 제작 방안

- 외국어 학습을 위한 챗봇 분류
  - 2) 상호 대화형
    - (1) Monica
    - 네이버의 인공지능 플랫폼인 Clova를 장착하여 제작된 영어 학습용 챗봇
    - 시나리오를 기반으로 주제를 제한하여 영어를 학습하는 목적으로만 설계된 영어 학습용 챗봇
    - (2) Andy
    - ZTO Lab에서 개발된 안드로이드 기반의 영어 학습용 챗봇
    - 영어로 회화를 학습하도록 설계되었으며 사용자와 채팅을 통해 문법과 어휘도 학습하며 게임을 수행



## 이동한(2019) 초등영어교과서를 활용한 영어말하기 학습용 챗봇 제작 방안

- 초등영어 교과서를 활용하여 직접 챗봇을 개발하는 방법을 제시
- 챗봇 제작을 위한 플랫폼으로 Google Assistant의 Dialogflow를 선택 및 제작 방법 소개
- 수준별 대화문을 만들어 초등 학습자의 수준에 맞추어 말하기 학습을 진행
- 수준별 대화문은 문자의 길이와 어휘의 난이도 등에 근거하여 "기본형", "응용형", "고급형"으로 분류하여 챗봇과 직접대화를 할 수 있는 방안을 제시
- 초등영어 교과서에 나오는 다이얼로그 내용을 바탕으로 직접 제작한 챗봇을 활용하여 단계별로 학습할 수 있는 방안을 네 단계로 제안



## 시사점

첫째, 외국어학습, 외국어 교육과정에 근거한 과업을 수행할 수 있는 목적형 챗봇 프로그램 개발 필요 김혜영(2019)

둘째, 인공지능 학습자 코퍼스 구축 및 분석을 통해 외국어 학습자의 발화 특성을 도출하고 이를 챗봇 개발에 반영할 필요 김혜영(2019)

셋째, 인공지능이 영어 반응에서 발생하는 오류에 대한 데이터를 축적하여 학습자의 다소 부정확한 영어 발음도 알아들을 수 있도록 음성인식 능력을 향상시킬 필요 윤아남, 박미애(2020)

넷째, 학습자의 영어능숙도를 고려하여 챗봇의 대화 길이와 속도, 표현 등에 대한 조정 필요 윤여범, 박미애(2020)

다섯째, 스피커형 챗봇은 연속적인 대화가 불가능하다는 한계점 및 사용자의 요구에 따라 정보를 제공하는 역할에 그침 이동한(2019)

따라서 지속적으로 쌍방향 의사소통이 가능한 챗봇 개발 및 학습자의 니즈를 지속적으로 파악하여 데이터 구축하고 실제 맞춤형 학습플랫폼 구축을 위한 방안 모색



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# 환경과 어학능력점수에 따른 한국 성인 학습자들의 영어불안감 양상

고지은, 최윤덕, 이혜문<sup>2)</sup>  
(성균관대학교)

본 연구는 한국 성인의 영어학습과 관련하여 외국어(EFL) 학습자로서 관찰되는 독특한 불안 패턴을 제시한다. 불안감 패턴의 관찰을 위해 40개 문항으로 구성된 설문조사를 통해, 영어 사용 환경 (교실 안팎)과 토익 점수와 관련해 135명의 연구참가자들의 EFL에 대한 불안감을 조사하였다. 그 결과 영어 사용 환경에 따라 불안감이 크게 다르지 않다는 통계적 분석이 나왔다. 기존 연구와 달리 시험성적이 높은 사람은 시험성적이 낮은 사람에 비해 불안도가 높은 경향을 보였고, 시험성적이 불안감에 미치는 영향도 상당했다. 또한 영어 사용 환경과 시험 점수 사이에는 불안감에 대한 유의미한 상호작용 효과가 없었다. 본 연구는 이러한 결과의 원인으로 한국의 학습자들이 가진 높은 시험점수에 대한 목표가 선언적 지식 (declarative knowledge)을 의식적으로 처리하거나 어떤 형태의 영어 환경에서도 자기감시 (self-monitoring)를 하게 만들었고, 그 결과 일반적으로 한국 사회에서 요구하는 특정 어학시험 점수에 미치는 수준까지 명시적이고 의식적인 지식이 올라가며 불안감이 높아졌다 주장한다.

**JiEun Ko (고지은)** received a Master degree of Arts in English language and literature from Sungkyunkwan University, South Korea. Her research interests are task-based language teaching (TBLT) and individual differences in second language acquisition, including anxiety, memory, motivation, etc.

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2) 발표자: 고지은 /교신저자: 이혜문/ 제2저자: 최윤덕

interaction hypothesis, task-based language teaching (TBLT), neuro-cognitive approach to SLA.

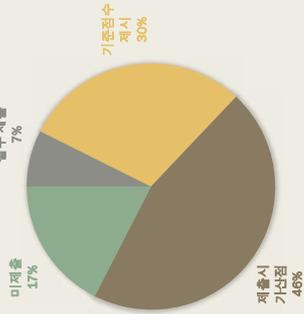
# 환경과 어학능력점수에 따른 한국 성인 학습자들의 영어불안감 양상

고지은, 최윤덕, 이혜문 (성균관대학교)

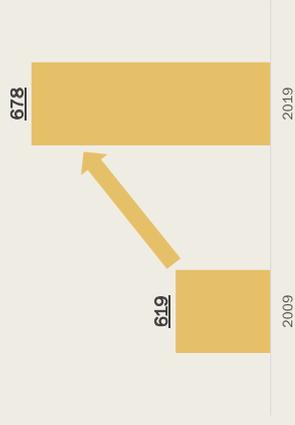
## Introduction

- ▶ 한국의 영어 = 필수적인 능력의 하나로 분류, 그 결과 점수 상승

2019년 채용공고 TOEIC 활용 현황



한국 수험자 TOEIC 평균점수



- ▶ 우리 국민은 전반적으로 영어 의사소통능력이 부족하고 또 자신감도 없는 것으로 나타나게 되었다(영어교육정책과, 2010),
- ▶ 초등학교 3학년부터 고등학교 3학년까지 10년의 영어 공교육에도 불구하고 외국인 앞에서는 제대로 **말을 하지 못하는 '병어리 영어'** 영어에 투자한 시간적·물질적 노력만큼 우리나라 국민의 영어실력은 높게 평가되지 못하고 있다(김하정 & 원효현, 2019).

외국어에 관한 불안감이 높은 이들은 학습한 외국어의 수행(performance)에 큰 어려움이 따른다.

(Machthye & Gardner(1994) p.301)

연구	시험 점수와 설문조사로 측정된 불안감 수치	음의 상관관계
Aida(1994)	Course grade & FLCAS	-0.38
Amiri와 Ghonsooly(2015)	Achievement test & FLCAS	-0.35
Phillips (1992)	Oral exam & FLCAS	-0.40
Zhao (2007)	Final exam & FLCAS	-0.23

비고. FLCAS =Foreign Language Classroom Anxiety Scale; 모든 상관 관계는 유의미.

- ▶ 박정숙(1996)
  - ✓ 영어 회화수업점수 & FLCAS
  - ✓ 불안감이 직물수록 회화 수업에서의 점수가 높게 나타났으며 불안감이 클수록 점수가 낮게 나타남
- ▶ 김현진(2005)
  - ✓ 불안감, 자기능력(perceived competence), 동기의 의사소통 하려는 의지, 의사소통 빈도 사이의 관계분석
  - ✓ 의사소통 빈도(학습자들이 수업에 참여하거나 실제로 제2언어를 사용하는 빈도)에 가장 큰 영향을 주는 것은 불안감과 자기능력

## Research Question

- 1) 한국 성인 영어 학습자들의 불안감은 교실 내 외라는 영어를 접하는 환경에 따라 다르게 나타나는가?
- 2) 한국 성인 영어 학습자들의 불안감은 그들의 영어 능력에 따라 다르게 나타나는가?
- 3) 한국 학습자들이 영어를 전하는 환경과 그들의 영어 능력은 서로 상호작용하여 불안감에 영향을 미치는가?

## Method & Procedure

실문조사  
(2019.12.30 ~  
2020.04.25)

조사결과  
정리  
(155명 / 40개 문항)

통계분석  
(155명 중 135명 /  
40개 문항)

- 구글에서 무료로 제공하는 설문조사 양식 (Google form)을 통해 진행
- 조사 결과는 SPSS 26.0를 통해 분석
  - ✓ Cronbach's  $\alpha = .92$  (교실내/20문항:  $\alpha = .91$  & 교실밖/20문항:  $\alpha = .85$ )

## Instruments

- 어학시험: 토익 (Test of English for International Communication, TOEIC)
- 설문조사: Hortwitz E, Horwitz M, & Cope (1986), Kitano (2001), MacIntyre & Gardner (1994)

	Hortwitz et al. (1986)	MacIntyre & Gardner (1994)	Kitano (2001)	합계
총 문항수	33	18	70	
교실내로 채택한 문항수	18	2	0	20
교실외로 채택한 문항수	7	11	2	20

## Participants

면	17	19	20	21	22	23	24	25	26	27	28	29	30	32	34	총	
형																합	
인	1	2	4	8	18	12	12	14	18	16	13	7	5	1	1	2	
원																135	
어학시험 점수	550 미만				550 ~ 699				700 ~ 849				850 ~ 990				총합
인원	14				31				40				50				135
스스로 인식하는 능력	하				중				상				총합				
인원	38				79				18				135				

## Research Question & Procedure

- 1) 한국 성인 영어 학습자들의 불안감은 교실 내외라는 영어를 접하는 환경에 따라 다르게 나타나는가?
  - ✓ 대응표본 T-검정 분석, Pearson 상관분석 & 윌콕슨 부호 순위 검정 (Wilcoxon Signed-ranks Test)
- 2) 한국 성인 영어 학습자들의 불안감은 그들의 영어 능력에 따라 다르게 나타나는가?
  - ✓ 독립표본 T-검정 분석, 일원분산분석 (One-Way ANOVA) & Games-Howell 사후 검정
- 3) 한국 학습자들이 영어를 접하는 환경과 그들의 영어 능력은 서로 상호작용하여 불안감에 영향을 미치는가?
  - ✓ 2 x 4 혼합 반복 측정 일반선형모형 (Mixed Repeated-Measures ANOVA) & Games-Howell 사후 검정

## Result I

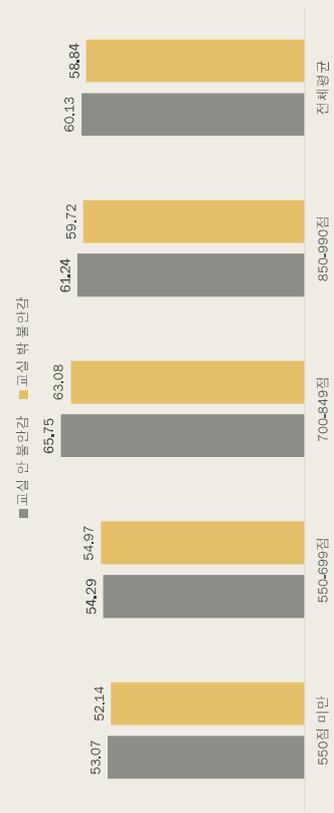
- 1) 한국 성인 영어 학습자들의 불안감은 교실 내외라는 영어를 접하는 환경에 따라 다르게 나타나는가?

➢ 전체응답자들의 교실내, 외 불안감 비교: 대응표본 T 검정 결과

환경	평균 (표준편차)	최소값, 최대값	평균치의 95% 신뢰구간	T 값	유의도 (p)	효과크기 (d)
교실 내	60.13 (16.44)	22, 99	-1.04, 3.63	1.10	0.28	0.09
교실 외	58.84 (12.24)	24, 90				

➢ 유의미한 상관관계 ( $r = .58, p < .001, R^2 = .33, N = 135, 95\% CI = 0.46, 0.68$ ).

➢ 토익 점수대 별 교실 내외의 불안감 수치 비교



➢ 토익점수대별 응답자들의 교실내, 외 불안감 비교: 윌콕슨 부호 순위 검정 결과

집단	N	중양값 (범위)		Z	R
		교실 안 불안감	교실 밖 불안감		
550점 미만	14	57.50 (52.00)	58.50 (48.00)	-0.04 (.97)	-0.01
550-699점	31	53.00 (51.00)	53.00 (51.00)	-0.31 (.75)	-0.06
700-849점	40	68.00 (75.00)	63.00 (58.00)	-0.99 (.32)	-.16
850-990점	50	58.50 (70.00)	59.00 (53.00)	-0.85 (.40)	.12

- ▶ 조사 대상자의 절대 다수(N=132)가 성인으로  
교육 환경의 차이를 인식하지 못했을 가능성 존재



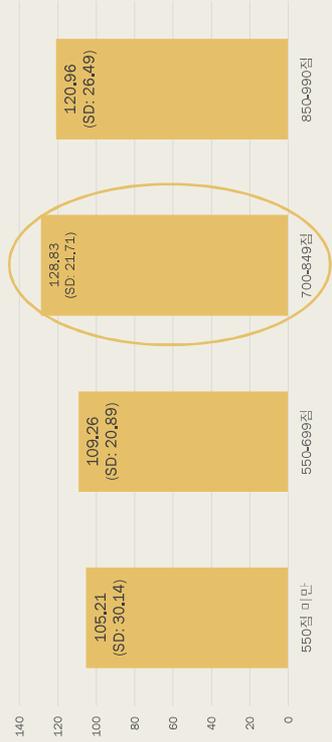
## Result II

- 2) 한국 성인 영어 학습자들의 불안감은 그들의 영어 능력에 따라 다르게 나타나는가?

▶ 토익 점수대별 상하 두 집단의 불안감 비교: 독립표본 T검정 결과

	평균 (표준편차)	최소값, 최대값	평균치의 95% 신뢰구간	T 값	유의도 (p)	효과 크기 (d)
상위 집단	124.46(24.66)	56, 189	7.70, 25.21	3.74	0.000	0.68
하위 집단	108.00(23.87)	50, 149				

▶ 토익 점수대별 네 집단의 불안감 합계



▶ 토익 점수대별 네 집단의 불안감에 대한 Games-Howell 사후검정 다중 비교 결과

비교집단	평균차이	평균차 95% 신뢰구간	유의도(p)	효과 크기 (d)
550점미만 vs 550-699	-4.04	-29.05, 20.96	.97	0.17
550점미만 vs 700-849	-23.61	-48.36, 1.14	.07	0.98
550점미만 vs 850-990	-15.75	-40.73, 9.24	.32	0.58
550-699 vs 700-849	-19.57	-32.97, -6.16	.002	0.92
550-699 vs 850-990	-11.70	-25.64, 2.23	.13	0.48
700-849 vs 850-990	7.87	-5.44, 21.17	.41	0.32

## Result III

- 3) 한국 학습자들이 영어를 접하는 환경과 그들의 영어능력은 서로 상호작용하여 불안감에 영향을 미치는가?

### > DeKeyser(2007)의 기술습득이론

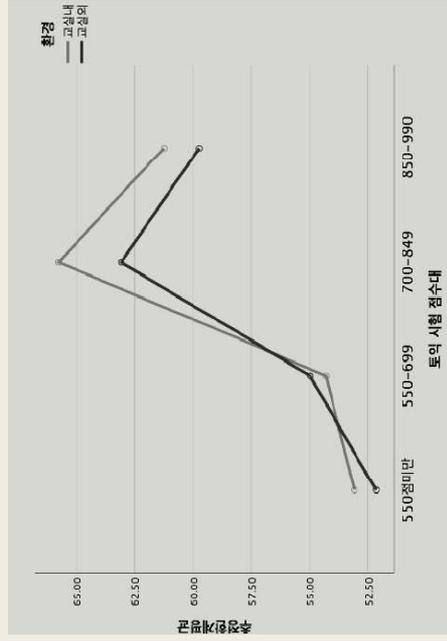
선언적 지식  
(declarative knowledge)

절차화  
(proceduralization)  
과정을 거쳐

자동화  
(automaticity)

### > Krashen(1981)의 Monitor 가설

- ✓ 습득(acquisition)과 학습(learning)을 구분하는 Acquisition-Learning hypothesis
- ✓ 학습한 내용은 모니터 하는데 그치며, 발화를 위해서는 습득이 필요하다는 Monitor hypothesis



## Conclusion

- 1) 한국 성인 영어 학습자들의 불안감은 교실 내외라는 영어를 접하는 환경에 따라 다르게 나타나는가?

✓ 환경은 학습자들의 불안감에 차이를 가져오지 않았을 뿐 아니라 서로 유의미한 상관관계를 가짐

- 2) 한국 성인 영어 학습자들의 불안감은 그들의 영어 능력에 따라 다르게 나타나는가?

✓ 토익 점수대에 따른 불안감 차이 존재: 상위 집단에서 유의미하게 높은 불안감을 보임 (700-849점대 집단에서 가장 높은 불안감 관찰)

- 3) 한국 학습자들이 영어를 접하는 환경과 그들의 영어능력은 서로 상호작용하여 불안감에 영향을 미치는가?

✓ 토익 점수대와 교실내외환경의 유의미한 상호작용 없음

- ✓ 어학시험능력과 실제 의사소통 능력의 구분에 대한 추가적인 논의
- ✓ 연구참여자와 도구에 대한 객관성, 타당성 보충
- ✓ 정확한 근거에 기반한 원인의 탐구

감사합니다

## 효율적인 대학 온라인 수업을 위한 연구 영화를 활용한 영어 독해 수업을 중심으로

김혜정  
(국민대학교)

2020년 초에 전 세계는 뜻하지 않았던 코로나 19 사태로 인해 급격한 사회적, 정치적, 경제적 변화를 겪었고 이는 교육적 상황에도 예외는 아니었다. 오프라인 수업이 당연시되었던 교육 학습 환경을 온라인 수업으로 급작스럽게 바꾸는 계기가 되었고 이러한 빠른 변화에 대응하기 위해 많은 교수자들뿐만 아니라 학습자들 또한 많은 노력을 기울여야 했다. 코로나 19 사태가 완전히 안정된 상태로 판명되기 전까지 온라인을 통한 학습은 지속될 것으로 전망된다. 이에 교수자들은 온라인 환경에서 좀 더 효과적인 수업을 하기 위해 그리고 학습자들이 좀 더 주도적으로 학습할 수 있도록 하기 위해 온라인 수업을 좀 더 체계적으로 준비할 필요가 있겠다. 이를 위해 본 연구에서는 2020년도 1학기의 영화독해 온라인 수업을 사례 연구로 제시하고 이 수업의 분석을 통해 더 나은 온라인 수업의 준비를 논의해 보고자 한다.

**Kim, HyeJeong** is an Associate Professor in College of General Education at Kookmin University. She is a treasurer of STEM (The Society for Teaching English through Media). Her research interests include English Education using Movie, Pragmatic Discourse in a Movie, Movies as an Educational Tool.

## 목차

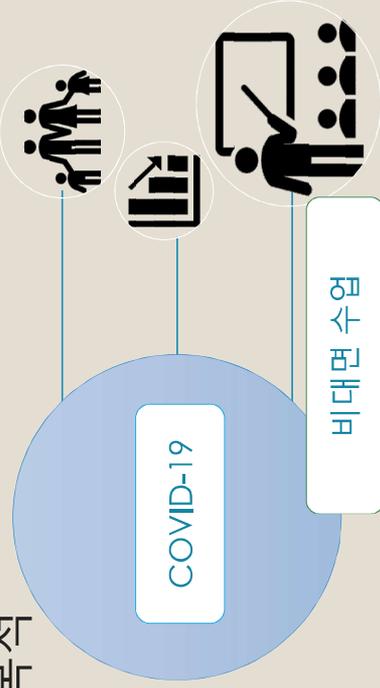
1. 본 연구의 목적
2. 본 연구 방법 (수업 교재, 절차, 방식)
3. 본 연구 결과 (설문 조사)
4. 결론

효율적인 대학 온라인 수업을 위한 연구:  
영화를 활용한 영어 독해 수업을 중심으로



김혜정  
(국민대학교)

## 1. 목적



## 포스트 코로나 시대

시대적 변화를 자각하고 교재와 강의를 대체할 수 있는  
온라인 수업을 위한 효율적인 수업 방식

2020-1 학기

영화 독해  
Movie English  
for Reading

# 1. 수업 교재

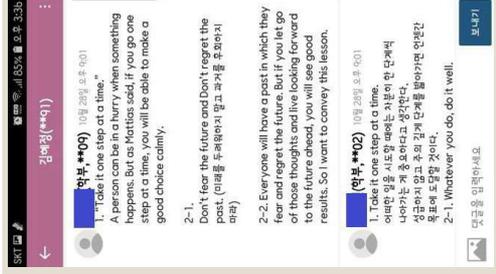
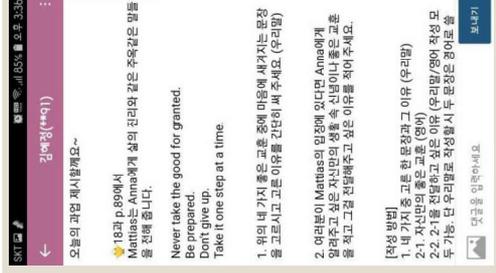
- 영화 속 대화와 영상을 보며 **어휘, 상식 및 배경지식**을 넓힌다.
- **영화 속 반대사**들을 통해 영어 독해에 흥미를 붙이고 자신감을 갖도록 한다.



# 2. 수업 절차

- 학교 전용 모바일 앱 (K-앱) **워밍업(언어 학습) & 출석**
- 동영상 업로드 **본문 학습 & 문화 설명**
- 과제, 퀴즈, 토론 **심화 학습**
- (선별적 제시)
- 가상대학 채팅 **학생들과의 소통**

# 학교 전용 K-앱



- 동영상 강의 및 수업 참여 활동
- 수업 동영상 업로드
- 과제 (교재 활용)
- 토론
- 퀴즈

※ 2주차 [3월23일 - 3월29일]

- ▶ Day 2 2024-05-20 00:00:00 ~ 2024-05-27 23:59:00, 18:37
- ▶ Day 3 2024-05-20 00:00:00 ~ 2024-05-27 23:59:00, 12:32
- ▶ Day 4 2024-05-20 00:00:00 ~ 2024-05-27 23:59:00, 15:21
- ▶ 과제 1 2024-05-28 00:00:00 ~ 2024-04-03 23:59:00
- ▶ 과제 2 2024-05-28 00:00:00 ~ 2024-04-03 23:59:00
- ▶ 토론
- ▶ 2020년 3월 27일의 마지막까지 사용가능
- ▶ 퀴즈 (10분형) 2024-05-28 08:41:00 ~ 2024-05-27 23:59:00



### 과제 1

\* 교재 pp. 47~48에서 Nick에게 Hopps는 이상적인 꿈을 쫓는 인물로 보입니다. 그런 그녀를 위해 그는 충고 아닌 충고를 하게 되는데요. 여러분이 Hopps 라면 Nick의 연설을 듣고서 어떻게 반대 의견을 제시하겠습니까? Nick의 시니컬한 얘기에 어떻게 반응할 것인지를 작성하세요. (영어작성, 6문장 이상)



### 과제 1

\* 교재 pp. 47~48에서 Nick에게 Hopps는 이상적인 꿈을 쫓는 인물로 보입니다. 그런 그녀를 위해 그는 충고 아닌 충고를 하게 되는데요. 여러분이 Hopps 라면 Nick의 연설을 듣고서 어떻게 반대 의견을 제시하겠습니까? Nick의 시니컬한 얘기에 어떻게 반응할 것인지를 작성하세요. (영어작성, 6문장 이상)



### 회신: 토론

2020-03-29 15:48 조현철 씨 2개 작성

I'm disagree with Mabr freedom  
 This is what I felt while working part-time job.  
 When I under a boss who swears when I make a mistake,  
 I'm always nervous, so even if I do the work I can do well,  
 I'm afraid to do it because I'm afraid of my boss's anger.  
 On the contrary, when under a boss who compliments me when I make a mistake,  
 I'm always encouraged even though I make a mistake. I gain confidence,  
 and not walk on eggshells and able to judge for myself so it allowed me  
 to do better on a work.  
 So, I think encouragement and compliment is better than swear who don't  
 do well on something.

원글 보기 | 수정 | 삭제 | 답변 등록

### 회신: 토론

2020-03-28 15:08 김태환 씨 2개 작성

저는 저 정도의 말은 긍정적이라고 생각합니다.  
 토끼가 장점이 되어도 인간도 단점을 띠어서, 두 다는 동물보다 훨씬하게 똑똑이 하고 재능이 약하기 때문에 더욱 노력과 경쟁을 치열하게 할 수밖에 없습니다. 그러기 위해서 다른  
 동물보다 더 많은 노력과 큰 고집을 갖게 되고 그것을 이겨내기 위해서 프리드랜스사의 도구가 좋다고 하려고 생각합니다.  
 만약 제가 저의 재능에 양지 않는 집단에서 혼란을 받게 되겠으므로 저는 프리드랜스 회사에 한 만큼 강한 자라적인 분위기를 조성하여 더 확실하게 할 수 있을 것 같습니다. 그래서 저의 회사의 사정에  
 한성합니다.

원글 보기 | 수정 | 삭제 | 답변 등록

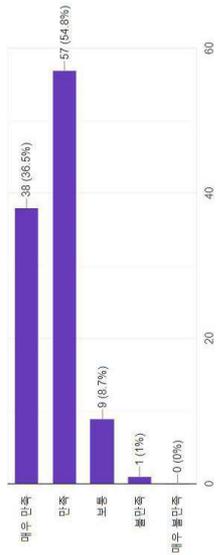
## 3. 온라인 수업에 대한 학생들 의견

- 설문 조사
- 104명 대상

## 1) 온라인 수업에 대한 만족의 정도는? (5점 척도)

1. 본 강좌의 온라인 수업에 대한 전체적인 만족도는?

응답 104명



## 2) 1번 답변에 대한 이유는?

2. 위 1번 답변에 대한 이유는?

응답 88명

- 온라인으로 수업하더라도 체계적인 과제와 수업진행률 통해 몰입감이 없었다
- 수업이 재미있습니다.
- 집과 학교거리가 떨어져 집에 강의 듣는 것이 편합니다.
- 수업에 대한 만족은 높으나 매번 감질만 나게 끝나서 아쉬워요ㅠㅠㅠㅠㅠㅠ
- 재미있고 부담이없으면서도 유용하다.
- 복습이 가능해서 좋습니다!!
- 모든온라인수업중에 집중도가 높은편
- 온라인으로도 딱히 문제보지 않고 많이 배울 수 있는 것 같다.
- 과제가 복잡하지 않고 영화도 너무 재미있고 교수님도 친절하시다.

온라인 학습의 편이성

### [재미와 흥미]

- 지루하지 않기때문에
- 영화 보면서 해서 재밌어요.
- 집에서만 강의를 들으니 너무 지루했는데 영화를 보면서 영어를 배우니 더욱 흥미가 생기고 간단한 퀴즈와 과제로 인해서 더 공부할 수 있게 됩니다.
- 영화를 좀더 구체적으로 분석할 수 있다.
- 영어로 된 영화를 재밌게 보면서 배울 수 있기 때문

### [수업 체계]

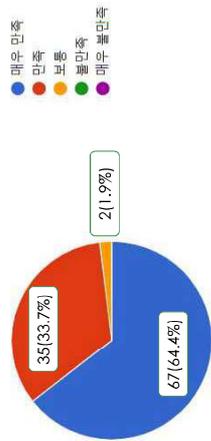
- 영어 회화에 많은 도움이 되서
- 비록 온라인 수업이지만 수업에 대한 이해도가 높다.
- 인터넷 강의임에도 수업에 몰입이 잘 되게끔 수업을 구성하신 것 같습니다.
- 실시간 과제와 매주과제가 따로 있어 그래도 수업처럼 참여할 수 있는 것 같다.

## 보완점

- 기말고사 대비를 어떻게 해야 할 지 모르겠어요TT 전체적으로 다 다루시다 보니 뭐가 중요한지 잘 모르겠습니다.
- 퀄리티는 만족스러우나 수업에 다루는 내용의 **난이도가 너무 쉽다.**
- 대면강의가 아니다 보니 **집중력이 떨어질 때가 많고**, 모든 강의를 챙겨 보기가 벅차다.
- 과업이 어려운 것은 아니나 조금 번거롭다.

### 3) 수업 교재에 대한 만족의 정도는? (5점 척도)

3. 영화 Zootopia\*에 대한 만족도는?  
응답 1047개



### 4) 3번 답변에 대한 이유는?

#### 흥미

- 응답 89개
- 그냥 재밌다라고만 생각하는데 그것인데 대사하나하나 되짚어보는 게 흥미롭다.
  - 생각할 점이 많은 영화이기 때문에
  - 귀엽다
  - 많이 어렵지도 않고 재밌는데, 처음보거나 유용한 표현들이 많이 있다.
  - 원래도 주토피아를 좋아했는데 하나하나 뜯어보니 배운 것도 많은 영화라고 느꼈다.
  - 귀여운 동물들과 탄탄한 스토리, 그거 이 수업만 기다려요 T
  - 재미가 있습니다
  - 흥미롭다
  - 재미 좋아하는 디즈니♥

4. 위 3번 답변에 대한 이유는?  
응답 89개

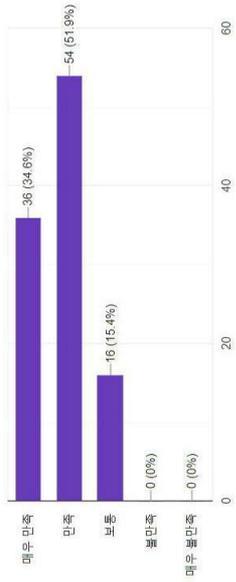
- 주토피어를 분석하는게 재밌는거 같아요. 북인 영화인데, 몰랐던 부분(페리디 같은 것들), 뒷 이야기 등을 알 수 있어서 좋아요.
- 너무 좋아하는 영화이기 때문인니당
- 디즈니 영화 중 제일 좋아하는 영화이다
- 그냥 볼 때는 지나쳤던 것들도 보게 되서 재밌어서 재밌고 동물들이 귀여워요
- 디즈니 영화를 원래 좋아하기도 하고 몰랐던 포인트들을 진어서 또 보니 새로워서 좋다
- 평소 애니메이션을 좋아해서 그런지 주토피어로 수업을 하니 조금 더 집중을 할 수 있게됐습니다.
- 영화 주토피어를 영어로 접해서 더 재미있고 색다르게 느껴진다.

### [영화가 주는 메시지]

- 영화에 거부감이 없음 어려운 내용이 아님
- 교훈이 많은 영화라는 생각이 듭니다!**
- 다양한 메시지를 전하는 영화인 것 같아서 좋습니다.
- 재밌을뿐더러 **사회적 이슈를 담고있어서**
- 영화의 메시지도 좋고 애니메이션이 재밌다.**

### 5) 수업 방식에 대한 만족의 정도는? (5점 척도)

5. 본 강좌 수업 방식에 대한 만족도는?  
응답 104개



### 5) 5번 답변에 대한 이유는?

6. 위 5번 답변에 대한 이유는?  
응답 92개

- 수업방식에 대해 만족하지 않은 부분은 없으며 앞으로 이대로 진행된다 하더라도 크게 부족함이 느껴지지 않는 것 같습니다
- 좋습니다
- 딱히 불편이 없습니다
- 주토피어에 나온 몰랐던 페리디 부분을 설명해주시므로 해서 더 좋았습니다.
- 1번과 같은 이유
- 출석체크, 강의 퀴즈 등이 체계적이다.
- 일주일 중 특정한 시간에만 강의를 수강하도록 하지 않아서 좋습니다. 유동적으로 스케줄을 생각할 수 있어 좋아요
- 없습니다.



8. 본 강좌에 바라는 점이나 하고 싶은 말은 말이 있다면 기탄없이 써주세요~

응답 84개

COMMENTS (1) REPLY

교수님 감사합니다.

막히었습니다

한 과를 진행할때마다 외워야되는 숙어가 너무 많습니다ㅠㅠ

감사합니다.

점수가 걱정돼요..

항상 열심히 하시는 것 같아서 정말 감사하게 생각하고 있습니다. 때문에 수업하면 더 좋겠지만 아쉬워요...  
그래도 많은 학기 동안 온라인 수업으로 할 수 있도록 부탁드립니다!

교수님이 밝으셔서 들을 때마다 같이 신나는 것 같아요

없음

## 4. 결론

온라인 영화 독해 수업에 대해 전반적으로 만족하는 긍정적인 태도

수업 내용에 대한  
흥미와 재미  
+  
체계적 학습

신화 학습의  
필요성

이미 온라인 학습에 적응하고 있는 학습자들을 위해  
앞으로 나아갈 방향 모색의 필요성

개인 맞춤형 학습  
자기 주도적 학습

조별 활동, 의견 교환이나 토론,  
질의 응답(소통)

개인의 관심 주제를  
구체화, 말로 표현하는  
기회, 영상 제작

발표 영상  
제작 (3분)

Zoom을 활용한  
화상 강의 병행

2020-2학기



감사합니다. ^^

기혜정

naa4907@kookmin.ac.kr

## 동료 코칭을 통한 초등영어교사의 정체성 탐색

박선영

(광주태봉초등학교)

This qualitative multiple case study observed the peer coaching process and tracked the changes in four elementary school English teachers as they participated in peer coaching. The purpose of this study is to investigate the patterns and processes involved in peer coaching interactions, as well as the changes in teachers' identities. Four participants were divided into teams of two teachers who participated in peer coaching for a period of eight months. The peer coaching took place in a five-stage cycle involving pre-instruction coaching, class observation, post-instruction coaching, planning of action, and action. Data were collected from multiple sources including interview, lesson plans, classroom observations, peer coaching observations, teachers' self-reflective essays and field notes. Data were analyzed using constant comparative methods as well as narrative inquiry methods. The key findings of the peer coaching were as follows: First, participants opened themselves up to vulnerability based on confidentiality and were aware of the disjuncture between their beliefs and their lessons, which led them to undergo self-transformation. Second, the construction of teachers' identities was affected by communication with peers and dependent upon the sociocultural context. The findings of the study suggest peer coaching as a catalyst to empower teachers to reflect on their classroom practice. The findings also indicate that teacher identity and emotions need to be considered in teacher education. This study is expected to contribute to the field of L2 teacher education research and promote collaborative and collegial learning environments in school.

**Seonyoung Park** teaches at Gwangju Taebong Elementary School in Gwangju. She received a Ph.D. in English Education from Chonnam National University. Her main professional interests are teacher development through peer coaching, teacher feedback and multi-sensory activities including music. Email: bsy122@hanmail.net

## 동료 코칭을 통한 초등 영어 교사의 정체성 변화 탐색

### □ 질적 연구, 다중사례연구(multiple case study)

#### □ 연구 문제

1. 동료 코칭에서 나타나는 초등교사들의 상호작용 과정과 유형은 어떠한가?
2. 동료 코칭이 초등교사들의 정체성에 미치는 영향은 어떠한가?

#### □ 이론적 배경

1. 사회문화 이론과 후기 구조주의 : Vygotsky(1978), Bahktin(1981,1986)
2. 교사교육 : Freeman(1989)의 교사교육, 교사발달
3. 교사 정체성과 감정: Golembek & Doran (2014), Lasky (2005)  
Zembylas (2002, 2003)
4. 코칭 : 동료코칭(Robbins, 1991; Gottestman,2000)  
수업코칭(신을진, 2015; 이규철, 2016; 김효수 외 2018)

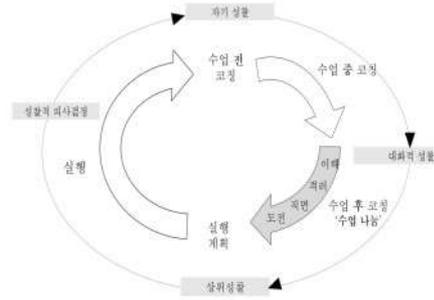
#### □ 연구방법

1. 연구참여자 : 초등교사 4인(담임교사 2인, 영어전담교사 2인)
2. 연구 기간 및 절차

	기간	연구 및 실행 내용			
	연구 주제 설정 및 계획 (2017. 3. ~ 12.)	- 문헌 연구 및 선행 연구 분석 - 연구 주제 설정 - 연구 문제 및 계획 수립			
	연구방법 및 절차 수립단계 (2018. 1. ~ 2.)	- 연구 참여자 선정 - 자료 수집 및 분석 방법 선정 - 자료 수집 및 분석 도구 구안 - 동료 코칭 절차 선정			
연구 실행 및 자료 수집 단계 (2018. 3. ~ 10.)	사전세미나 및 사전 면담 (2018. 3.)	- 연구 참여자들의 기초 자료 수집 - 동료 코칭을 위한 사전 교육 실시 - 구조화된 면담 실시			
		수업 전	수업 중	수업 후	
	1차 동료 코칭	수업 전 성찰	수업 촬영 및 관찰	면대면 코칭	코칭 후 성찰
	2차 동료 코칭	수업 전 성찰	수업 촬영 및 관찰	면대면 코칭	코칭 후 성찰
	3차 동료 코칭	수업 전 성찰	수업 촬영 및 관찰	면대면 코칭	코칭 후 성찰
	4차 동료 코칭	수업 전 성찰	수업 촬영 및 관찰	면대면 코칭	코칭 후 성찰
	사후 면담 (2018. 10. ~11.)	- 연구 참여자의 데이터 분석을 통해 나타난 주제에 대한 질문을 마련하여 반 구조화된 사후 면담 실시			

### 3. 동료 코칭의 실행

- 가. 수업 전 코칭: 수업안/수업 전 성찰지 작성/공유
- 나. 수업 중 코칭: 수업 촬영 및 관찰
- 다. 수업 후 코칭: 수업나눔(이해, 격려, 직면, 도전)
- 라. 실행 계획: 동료코칭 전체 과정 성찰, 도전내용 성찰지에 기록
- 마. 실행: 수업 및 일상생활에서의 도전내용 실천



#### 4. 자료 수집 및 분석

##### 가. 자료 수집

수집 자료	수집 내용
면담 자료	- 사전 면담(구조화된 면담)을 실시하여 녹음을 하고 그 내용을 전사 - 사후 면담(반구조화된 면담)을 실시하여 녹음을 하고 그 내용을 전사
성찰지	- 연구 참여자의 수업 전 성찰지 수집 - 연구 참여자의 수업 후 성찰지 수집 - 연구 참여자의 동료 코칭 후 성찰지 수집
현장 기록	- 수업 및 동료 코칭 과정을 관찰, 현장 기록 작성
수업 동영상 자료	- 연구 참여자가 공개한 수업을 촬영하여 전사
동료 코칭 녹음 자료	- 동료 코칭 과정을 녹음하여 전사
수업안	- 공개하는 수업의 목표 및 활동을 기록한 수업안

나. 자료 분석 : 반복적 비교분석법(Strauss & Corbin, 1990), 내러티브 탐구

#### □ 연구결과

##### 1. 동료 코칭에서의 상호작용

- 가. 신뢰 구축 및 상호개방
- 나. 교사 내면의 신념 발견
- 다. 개인 내적 갈등 및 외적 갈등
- 라. 자아와 타자와의 대화적 소통
- 마. 카니발, 창조적 공간
- 바. 배움의 공동체 형성

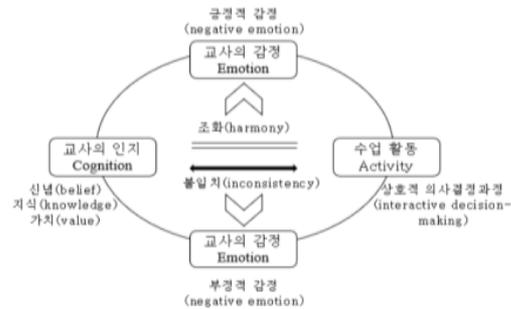
2. 각 교사의 정체성 변화 : 고정된 실체가 아니라 유동적이며 역동적임, 정체성 협상이 일어남

교사 정체성(professional identity)	
교사	“우리 반만 못나 보인다(수치심)” →
A	“내 수업이 작품이 된 것 같다. 내가 의미 있는 교사의 삶을 위해 노력하는 걸 이해 한다.”
교사	“나쁜 선생님.” → “나는 괜찮은 선생님이야”, “상으로 올라가는 모습”

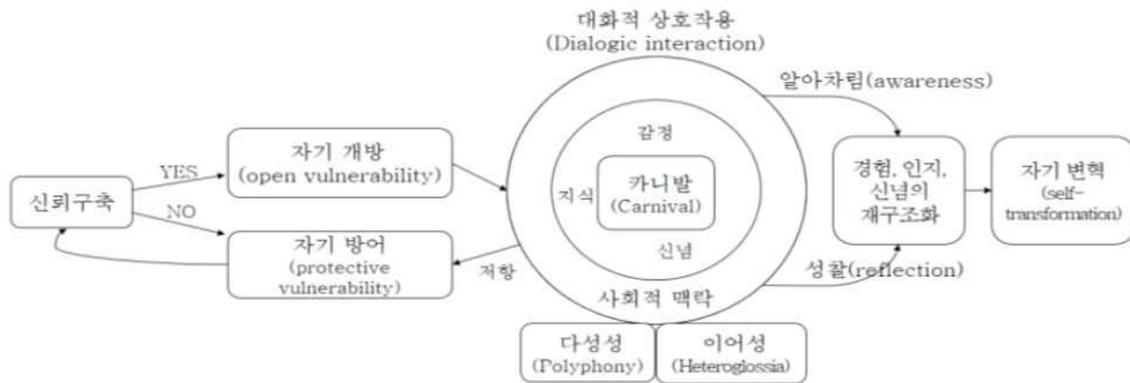
B	
교사	“영어교사를 포기하고 싶은 마음도 들었지만, … 포기하지 않고 계속해서 나의 영어 실력을 향상하기 위해 노력해야 겠다.” (비원어민 교사로서의 정체성)
C	“근데, 지금 내가 영어교사예요. 그래서, 내가, 지금, 우리 아이들을 담임으로서 또, 영어를 가르칠 때, 내가 조금 만 더 준비를 하면, 더 아이들에게 유익한 정보들을 제공할 수 있을 거 같아서, 그 부분을 잘 살려야겠다…” (영어교사와 담임교사의 정체성 협상)
교사	“영어교사로서 나는 어떤 사람인가? 나는 어떤 재능을 가지고 있는가?”
D	→ “나에게 영어, 교사로서의 재능이 있다라는 거 자체가 되게 감사하고”

#### 4. 논의

연구 참여자 4인의 교사들은 동료 코칭 과정 가운데 그들의 신념이나 지식의 총체인 인지와 수업 활동 간의 조화 및 부조화를 경험하였다. 동료 코칭 가운데 교사들은 감정과 관련된 용어를 빈번하게 사용하였으며, 교사가 표현한 감정이 그들의 인지(신념, 지식, 가치)와 수업 활동의 조화 및 불일치를 나타내는 지표로서 작용함을 볼 수 있었다. 이는 Golembek와 Doran(2014)의 주장과 맥을 같이 한다.



동료코칭 과정을 도식화하면 다음과 같다(Bahktin1981,1986; Lasky, 2005).



#### □ 결론

본 연구는 동료코칭이 초등교사의 영어 수업 및 정체성에 미치는 영향을 알아보기 위하여 8개월 동안 실시되었다. 연구 결과를 종합하여 제시하면 다음과 같다.

1. 교사들이 동료의 격려와 지원을 받으면서 자신들의 수업을 성찰하고 경험을 재구성하는 과정을 통해 변화하는 과정을 관찰할 수 있었다.
2. 교사들은 내적, 외적 상호작용을 통해 정체성을 재구성해 갔으며 동료코칭이 교사들의 정체성에 긍정적인 영향을 끼침을 알 수 있었다.

3. 교사의 정체성 변화는 수업에서의 변화와 학생들의 성장으로 이어지는 것을 관찰할 수 있었다.

#### □ 제언

1. 본 동료코칭은 수업을 하고 난 후 함께 성찰하는 과정으로 수업을 공개하기 전에 함께 생각하는 시간이 부족했던 한계가 있었다. 추후에 ‘동료코칭’을 연구함에 있어서 ‘사전협의’의 과정을 포함할 필요가 있다.
2. 연구참여자 선정에 있어서 또래 동료뿐만 아니라 서로 다른 경력의 교사들을 선정하여 동료코칭 과정에서의 상호작용을 살펴볼 필요가 있다.
3. 마지막으로 교사의 발달을 위한 동료코칭은 ‘성찰’ 뿐만 아니라 ‘지식’과 ‘기능’의 발달이 함께 상호적으로 이루어져야 할 필요가 있다. 본 연구에서도 ‘수업 성찰’ 뿐만 아니라 ‘교수 기능’과 ‘영어 기능’을 발전시키고 싶은 교사들의 필요가 있었다. 따라서 동료코칭에 있어서 Freeman(1989)의 주장처럼 ‘지식과 기능’에 초점을 맞춘 교사훈련(teacher training)과 ‘태도와 알아차림’에 초점을 맞춘 교사발달(teacher development)이 상호보완적으로 이루어질 수 있는 방향을 모색하는 추후 연구 및 논의가 필요하다.

# 디지털마인드맵 활용 초등영어학습자들의 영어능력 및 인식 변화 연구

윤택남

(춘천교육대학교 영어교육과)

본 연구의 목적은 디지털마인드맵을 활용한 영어 학습이 초등영어 학습자들의 영어 능력 향상과 정의적 영역에 미치는 영향에 관해 살펴보는 것이다. 이를 위하여 강원지역 초등영어학습자 45명을 대상으로 실험 연구가 실시되었다. 동질 집단으로 판명된 두 개의 반을 각각 실험반과 통제반으로 나누어 8주간 수업을 실시하였으며 실험반은 디지털마인드맵을 활용한 수업을, 통제반은 일반적인 방식의 영어수업이 이루어졌다. 사전과 사후에 걸쳐 영어 능력 테스트와 정의적 영역의 변화를 살펴보기 위한 설문지가 배포되어 분석되었다. 수집된 데이터를 양적으로 분석한 결과 디지털마인드맵을 활용한 실험반의 영어 능력이 통제반에 비해 높게 나타났으며 통계적으로도 유의미한 차이를 보였다. 정의적 영역의 경우 영어 학습에 대한 자신감 및 흥미 그리고 만족도 면에서 실험반이 통제반에 비해 높았던 것으로 나타났다. 이와 같은 결과를 통해 디지털마인드맵 기반 영어 학습이 초등영어교육에 있어 긍정적인 영향을 미칠 수 있다는 것을 확인할 수 있었다.

**Tecnam Yoon** is an associate professor of English education at Chuncheon National University of Education. His research agenda centers on applying new technologies to TEFL, using interactive multimedia, web-/AI-based language learning, or CALL/MALL software. He is also interested in developing multimediality, literacy practices and alternative pedagogies.

# 디지털마인드맵 활용 초등영어 학습자들의 영어능력 및 인식 변화 연구

GETA 학술대회  
춘천교육대학교 율택남

## 서론

- 2015 개정 교육과정: 영어에 대한 자신감과 흥미 향상 그리고 일상생활에서의 기초 의사소통능력 증진과 같은 목표
- 실제 언어 사용 환경이 고려된 활동 중심 수업
- 다양한 협력 학습을 통한 과업을 수행하는 과업 중심 교수법과 전략 중심 지도법
- Z세대(Generation Z) 학습자 특성 파악: 이미지와 시각적 기호 만 부호를 통한 정보 처리 - 인지 발달 촉진 → 학습자들의 성향을 반영한 교수 설계와 적용 필요

## 이론적 배경

- 마인드맵 활동: 학습자가 스스로 새로운 정보를 내재화 할 수 있도록 도와주며 영어 수업에서 학습 몰입도를 높이고 창의성 신장과 더불어 영어 능력 향상에 도움을 제공(Buzan, 2005; Mento., Martinelli, & Jones, 1999).
- 시각적 이미지를 통한 영어 수업의 전략 중심 지도법의 한 형태:

## 연구문제

- 첫째, 디지털마인드맵 활동은 초등영어 학습자들의 영어 능력 성취도에 있어 어떠한 영향을 미치는가?
- 둘째, 디지털마인드맵 활동을 통한 영어 학습이 정의적 영역 변화에 어떤 영향을 끼치는가?

## 마인드맵의 정의와 효과

- 정의: 핵심 주제를 중심으로 방사형으로 부가적인 정보를 덧붙인 형태의 시각적 지도(visual map)
- 브레인스토밍과 같이 새로운 아이디어의 구상과 정리에 효과적 학습자들의 사고방식을 이미지화하여 시각화가 가능하도록 할 수 있다는 점

주요 활동	
단계	텍스트 전체 통독해서 구성방식과 요점 파악하기 소요되는 시간 추측하기
Overview	
Preview	훑어보기를 통해서 주제와 핵심 단어 찾아내기 스키마 및 선형지식을 활용해 핵심 이미지, 주가지, 부가지 그려내기
Inview	자세히 읽기를 통해서 마인드맵에 세부가지 추가하기
Review	주의 사항을 확인하여 마인드맵을 완성하기

## 디지털마인드맵 관련 선행연구

- Fitria(2016): 마인드맵 전략(the Mind Mapping Technique, MMT)
- Hidayati 외(2019, 2020)와 Sayed(2019): 디지털 마인드맵 활용 전략
- 학업 성취도와 관련한 연구(Hong, 2014; Jbeili, 2013; Joseph, 2019; Lin & Faste, 2011)

## 마인드맵과 전략 중심 지도법

- 다양한 교과 내에서도 가능하며 특히 초등학교의 경우 마인드맵 활동을 통해 사고력과 창의력이 증진되는데 효과적
- 학습자들의 배경지식과 사전 경험을 토대로 마인드맵 활동이 어휘력 증진에 긍정적인 영향
- 마인드맵 영어 학습전략에 대한 인식이 높을수록 영어 능력 향취도 향상과 직접적인 관련이 있음

## 연구방법

- 대상: 초등학교
- 5학년 2개반 45명
- [www.mindmeister.com](http://www.mindmeister.com)

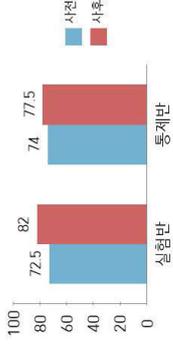
실용반 학생		통제반 학생	
구분	5학년 A반	5학년 B반	담당교사
인원(남22+여23)	남11명+여11명	남11명+여12명	영어전담 3인
합계(45명)	22명	23명	경력

2학년	통제반	실험반	3학년	통제반	실험반
도입	학습중기유발 · 새로운 주제 소개 (쉬운 마인드맵 활동)	학습중기유발 · 새로운 주제 소개 (쉬운 마인드맵 활동)	도입	학습중기유발 · 관심 학습 동기 · 단원 목표 확인 · Look & Speak	학습중기유발 · 관심 학습 동기 · 단원 목표 확인 · Look & Speak
관계	단원 목표 확인 · Look & Listen · Listen & Repeat · Look & Play	단원 목표 확인 · Look & Listen · Listen & Repeat · Look & Play	관계	· Listen & Sing · Listen & Repeat · Listen & Sing · Listen & Repeat · Look & Play	· Listen & Sing · Listen & Repeat · Listen & Sing · Listen & Repeat · Look & Play
정리	· Review · 정리하기	· Review · 정리하기	정리	· Review · 정리하기	· Review · 정리하기
4학년	통제반	실험반	4학년	통제반	실험반
도입	학습중기유발 · 관심 학습 동기 · 단원 목표 확인 · Look & Listen · Listen & Repeat · Look & Play	학습중기유발 · 관심 학습 동기 · 단원 목표 확인 · Look & Listen · Listen & Repeat · Look & Play	도입	학습중기유발 · 관심 학습 동기 · 단원 목표 확인 · Look & Listen · Listen & Repeat · Look & Play	학습중기유발 · 관심 학습 동기 · 단원 목표 확인 · Look & Listen · Listen & Repeat · Look & Play
관계	· Listen & Sing · Listen & Repeat · Listen & Sing · Listen & Repeat · Look & Play	· Listen & Sing · Listen & Repeat · Listen & Sing · Listen & Repeat · Look & Play	관계	· Listen & Sing · Listen & Repeat · Listen & Sing · Listen & Repeat · Look & Play	· Listen & Sing · Listen & Repeat · Listen & Sing · Listen & Repeat · Look & Play
정리	· Review · 정리하기	· Review · 정리하기	정리	· Review · 정리하기	· Review · 정리하기

# 연구결과1

## • 디지털마인드맵 활동과 영어 능력과의 상관관계

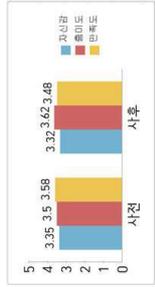
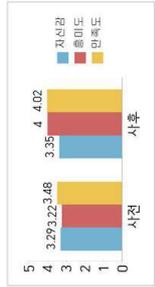
영역	구분	평균값	표준편차	값	유의도(p)
영어 능력 (31가산점)	실험반(N=22)	72.50	19.25	-28	.46
	통제반(N=23)	74.00	17.14		
영어 능력 (82가산점)	구분	평균값	표준편차	값	유의도(p)
	실험반(N=22)	86.00	11.99	3.37	.02
통제반(N=23)	77.50	16.22			



# 연구결과2

## 디지털마인드맵 활동에 따른 정의적 영역의 변화

정의적 영역 구분	실험반		통제반		유의도 (p)
	평균	표준편차	평균	표준편차	
영어에 대한 자신감	3.28	3.35	1.03	1.28	.26
영어에 대한 자신감	3.22	3.50	1.61	-55	.57
흥미도	3.48	3.58	1.24	1.95	.66
동기	3.76	3.82	1.51	1.30	.45
효과	4.08	3.95	.89	1.11	-2.42



# 결론

- 첫째, 디지털마인드맵을 활용한 영어 학습 활동이 영어 능력 향상에 도움을 제공한 것을 확인
- 실제 실험반과 통제반의 사후 검사의 평균치를 t-검정한 결과 신뢰도 95%(유의도 p<.05)에서 유의미한 차이
- 둘째, 디지털마인드맵을 활용한 영어 학습이 초등영어학습자들의 정의적 영역에 긍정적 영향
- 설문을 통해 확인한 정의적 요소(자신감, 흥미도, 만족도, 동기, 효과) 가운데 자신감, 흥미도와 만족도에 있어 두 집단이 통계적으로 유의미하다는 결과

## 논의

- 디지털마인드맵 기반의 영어 학습이 초등영어학습자들의 인지적 능력 향상에 상당부분 도움을 준 것
- 학습자들의 영어 학습에 대한 자신감과 흥미를 불러일으켜 적극적인 학습자로 수업에 몰입할 수 있는 기회를 제공
- 학습자들의 협동과 창의적 사고력 개발 및 활발한 상호작용을 통해 기존의 전통적 학습방법보다 효과적일 수 있음을 시사

# ONE PASS: 중등영어교사 임용시험 어플

이혜진  
(원광대학교)

본 발표는 중등영어교사 임용시험 준비를 위해 개발된 학습용 어플 ONE PASS 를 소개하고, ONE PASS 어플 개발과정에서 접목한 뇌의 기억 및 학습기제(the mechanisms of learning and memory) 이론을 조명하고자 한다. 본 발표는 크게 세 부분으로 이루어져 있다. 첫째, 서론에서는 중등영어 임용시험 어플인 ONE PASS 를 기획 및 설계하게 된 이론적 배경에 대해 언급하였다. 둘째, 본론에서는 뇌의 기억 및 학습기제 이론을 접목시킨 ONE PASS 어플 구현 결과에 대해 소개하였다. 마지막으로 결론에서는 발표 내용을 간략히 요약하고, 시사점을 도출하였다.

**Hyejin Lee** is an Assistant Professor in the College Of Education, Department of English Education at Wonkwang University, South Korea. She holds a Ph.D. in Foreign and Second Language Education from the State University of New York at Buffalo. Her research interests broadly revolve around teacher education, corpus linguistics, second language teaching and learning.

# ONE PASS: 중등영어교사 임용시험 어플

*One Pass: The Secondary English Teacher Recruitment Exam Prep App*

Presenter: Hyejin Lee (Wonkwang Univ.)  
lee.hyejin0419@gmail.com



본 연구는 2019년 대한민국 교육부와 한국연구재단의 인문사회분야 신진연구지원사업의 지원을 받아 수행되었습니다.(NRF-2019S1A5A803232).

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A-2. 뇌의 학습과 기억 과정  
A-3. 중등영어 임용시험(서답형)



# 스마트폰, PC 이용 행태

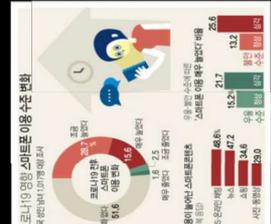


2019

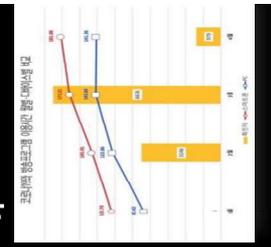


2020

VS



코로나 19, 스마트 폰 이용 수준 변화

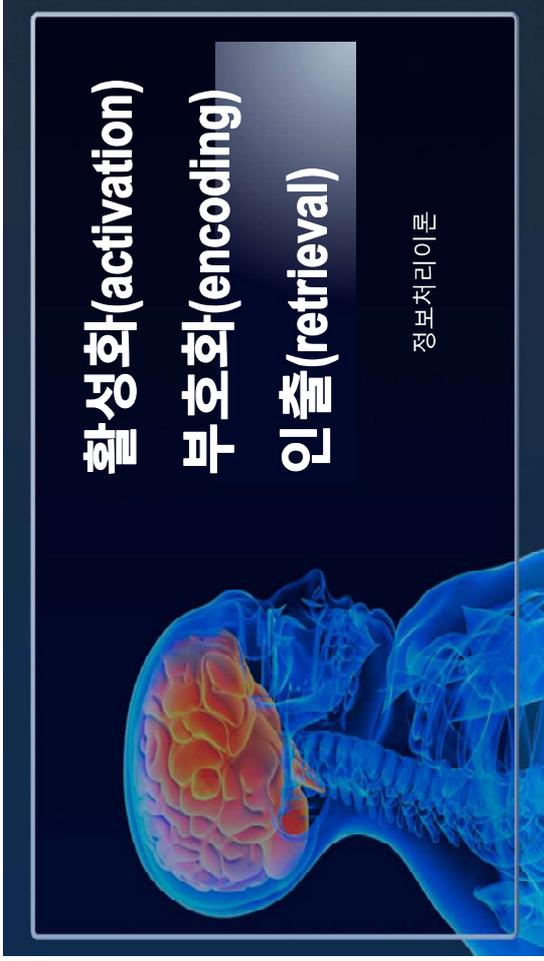


코로나 19, 스마트폰

출처: <https://www.nia.co.kr/view/G112-020703000100044>

출처: <https://www.dongpa.com/news/Ec-11747474.html>

출처: 방송통신위원회 | (2020), 방송위, 코로나-19에 따른 스마트폰, PC 방송프로그램 이용행태



## 학습과 기억(뇌 인지 관점)



활성화(activation)

부호화(encoding)

인출(retrieval)



## 중등영어 응용시험

- 연 1회, 서답형 실시
- 총 24문항: 교육학 1문항, 전공A(기입: 4문항, 서술: 8문항), 전공B(기입: 2문항, 서술: 9문항)
- 전공시험: 외국어 과목은 해당 외국어로 실시

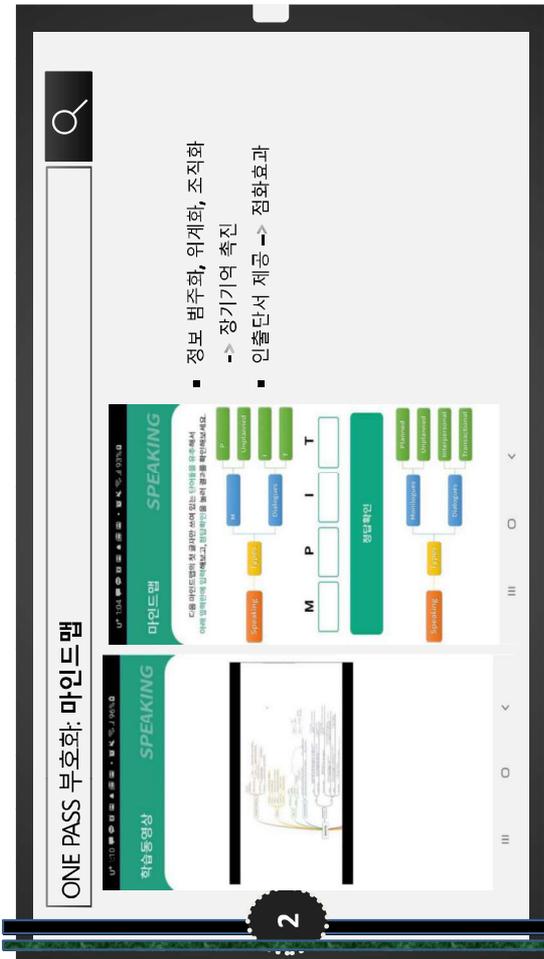


정확한 정보기억의 인출  
더 많은 인지적 노력

교시	1교시 : 교재형 주목란	2교시 : 전공 A 교과목별(25~35%) 교과내용(65~75%)	3교시 : 전공 B 교과목별(25~35%) 교과내용(65~75%)
형태 분야	어문 (09:00~10:30)	역문 (10:40~12:10)	9문 (12:20~14:20)
시험 시간	본문형 1문항	기입형 8문항	서술형 6문항
문항 유형	본문형	서술형	서술형
문항 수	1문항	8문항	5문항
문항량 배점	20점	2점	4점
교사범 배정	2명	4명	3명
출처: <a href="http://www.kice.re.kr/boardCnts/list.do?boardId=1500212&amp;searchStr=&amp;mp=030668&amp;cl=ice">http://www.kice.re.kr/boardCnts/list.do?boardId=1500212&amp;searchStr=&amp;mp=030668&amp;cl=ice</a>			



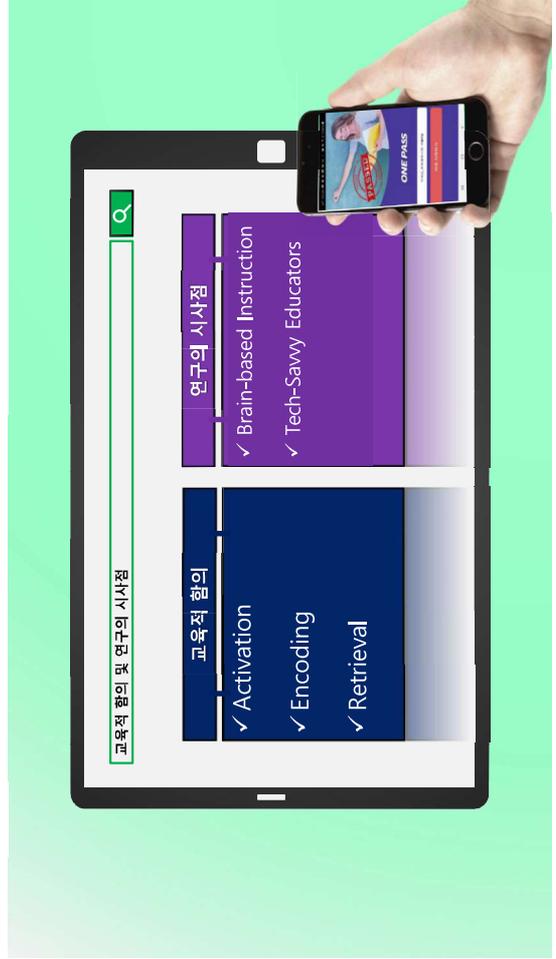


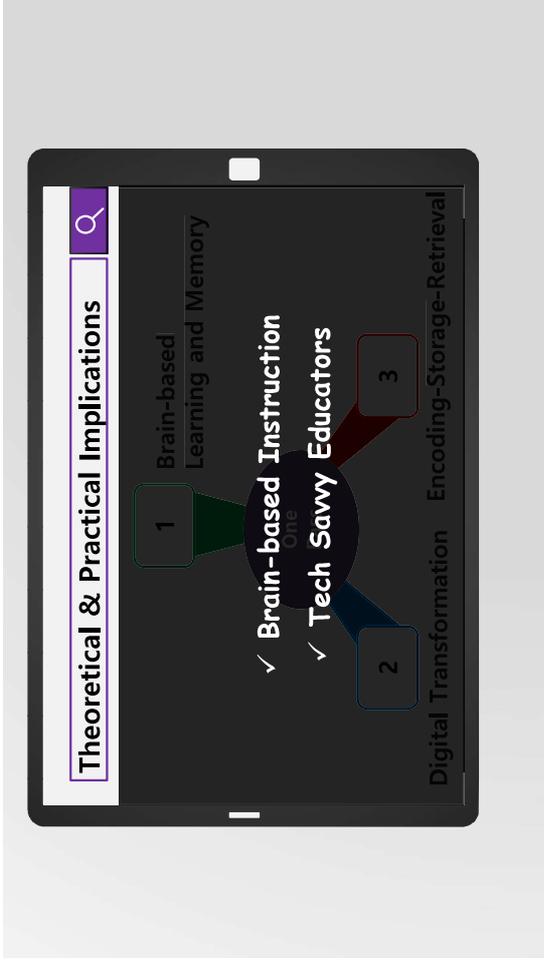
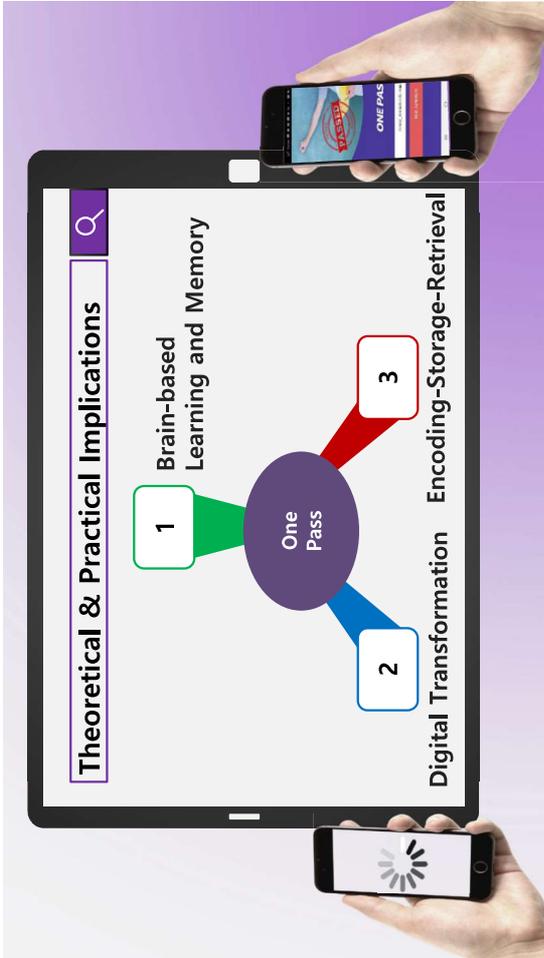


2



3





# AI 챗봇 활용이 한국 EFL 학습자의 말하기 능력 및 흥미와 동기에 미치는 영향

한다은  
(광주교육대학교)

본 연구의 목적은 인공지능(Artificial Intelligence, AI) 챗봇이 한국 EFL(English as a foreign language) 고등학생의 말하기 능력 및 학습자의 흥미와 동기에 미치는 영향을 검증하는데 있다. 이를 위해 전라남도 B군에 위치한 D고등학교에 재학 중인 1학년 44명을 연구대상으로 선정하여 실험집단 24명과 통제집단 20명으로 분류하였다. 2019년 4월 중순부터 7월 중순까지 13주에 걸쳐 실험을 진행하였으며, 실험집단은 AI 챗봇을 사용한 모둠활동으로 수업이 이루어졌고 통제집단은 기존의 영어수업 방식 그대로 일반적인 모둠 활동으로 이루어 졌다. 연구대상을 고려하여 세 가지 과업 유형 ‘잡담 나누기(Exchanging small talk),’ ‘정보 요청하기(Asking for information),’ ‘일상 대화하기(Having an everyday conversation)’를 선정했고, 각 유형의 특징에 맞게 다양한 주제를 다루었다.

먼저 실험 전후 참가자의 영어 말하기 능력에 변화가 있는지를 알아보기 위하여 사전·사후 말하기 시험을 진행하였고, 챗봇을 이용한 영어 학습에 대해 학습자의 흥미와 동기 수준에 변화가 있는지를 살펴보기 위해 사전·사후 그리고 추후 검사를 실시하였다. 자료 분석은 두 집단의 동질성 검증을 위해 실험집단과 통제집단의 사전점수 차이를 독립표본 t 검정(independent t-test)을 사용하여 검증하였다. 둘째, AI 챗봇 활용 후 실험집단과 통제집단 각각에 대해 사전-사후검사의 차이를 살펴 보기 위해 종속표본 t 검정(paired t-test)을 실시하였다. 셋째, 각 집단이 실험처치 후에 말하기 능력 및 흥미와 동기에서 어떤 변화가 일어났는지 알아보기 위해 실험집단과 통제집단의 사전점수를 공변인으로 두고 말하기 능력 및 흥미와 학습 동기 각각의 사전-사후점수 차이를 공분산분석(analysis of covariance; ANCOVA)을 사용하여 검증하였다. 특히, 시기에 따른 학습자의 흥미와 동기 수준 변화를 알아보기 위해 사전, 사후, 추후점수 차이에 대한 반복측정 분산분석을 실시하였다. 분석 후 유의미한 차이가 있는 요인에 대하여 Bonferroni 사후검정을 실시하여 그 차이를 세부적으로 살펴보았다. 모든 자료는 SPSS Statistics 23.0을 활용하여 분석하였다. 그리고 AI 챗봇을 경험한 학생들 중에서 4명을 선정하여 추가적으로 심층 면담을 하였다. 이는 결과의 논의를 보다 풍부하게 하고, 분석 결과의 타당도를 높이기 위함이다. 이와 더불어 수업을 직접 진행한 교사도 심층 면담하여 AI 챗봇의 영어교육 활용 가능성을 알아보고자 했다. 두 차례의 면담은 연구자가 준비한 질문들에 따라 진행되었고, 시간의 제한을 두지 않고 추가적으로 관련된 정보를 더 얻어낼 수 있는 반구조화된(semi-structured) 면담 형식을 가졌다.

이상의 연구과정을 통하여 얻어진 결과는 다음과 같다.

말하기 시험결과, 챗봇을 이용한 한국 EFL 학습자들의 말하기 능력이 유의미하게 향상되었다. 흥미와 학습 동기 영역 검증 결과, 영어 말하기 뿐만 아니라 영어 수업에 대한 학습자들의 흥미 및 동기 수준이 긍정적으로 변화하였다. 본 연구는 영어 발화 기회가 적은 EFL 환경에서 AI 챗봇이 발화의 기회를 제공하는 역할을 하였고, 이는 영어 말하기 능력 향상 뿐 아니라 학습자의 흥미 및 동기 측면에도 긍정적인 영향을 주었음을 발견하였다. 더 나아가 AI 챗봇의 영어 학습 활용에 대한 가능성과 개선점이 논의되었다는 점에서 의의가 있으며, 이를 통해 미래사회에 보다 구체적인 교수·학습 활용방안을 마련할 수 있게 되었다.

본 연구의 제언은 다음과 같다.

챗봇은 학습자들의 영어 능력 향상을 위한 하나의 학습 보조 수단이지 절대적인 대안이 될 수 없다는 것을 항상 염두에 두고 활용하는 것이 중요하다. 따라서 교사는 챗봇의 특성을 알고 학습 목표 및 학습 내용에 맞는 적절한 학습 활동을 설계하고 개발하여 학습자의 흥미와 동기를 지속적으로 유지시키고 영어 말하기 능력 향상에 도움이 되도록 하는 것이 중요하다. 이처럼 본 연구는 EFL 상황에서 AI 챗봇 기반 영어 학습에 대한 새로운 가능성을 모색하고, 효과적인 AI 챗봇 활용을 위한 제언을 도출하고 있다.

**Han Da-eun** received her Ph.D. in English Education at Chonnam National University in February, 2020. Dissertation: Effects of AI Chatbot on Korean EFL learners' speaking ability and affective domain.

# 영어 사교육에 대한 학부모의 인식 조사

한은지 / 김경자

(조선대학교)

The present study targets 72 participants, who are parents of middle and high school students regarding their perceptions of private English education through surveys and interviews. Additionally, this study analyzed and compared the differences in the perceptions between parents of middle and high school students and those between mothers and fathers.

Parents of middle and high school students felt that their English ability could be competitive by the international community, and that they would be treated well if they were good. Also, they considered the purpose of studying the English language was to communicate with foreigners, speaking skills were the most important to be considered. Most parents acknowledged that the best age for children to start their English education was in elementary level, yet through interviews it was discovered that students of parents started English education at much earlier age. The type of education preferred by parents was academies, since it can support the English education of school. In contrast, the main reason why some parents were not sending their kids to private education was that their children refused to. There were few parents that were not satisfied with the costs of sending their children to private education but most were satisfied with the outcome of improving their children's grades, and agreed that the environment at these private education was far superior than that provided at schools. On the other hand, the parents found it much more difficult to engage in private education as their children's learning content increased, also they believed that a qualified instructor would need to have abundant knowledge in their field as well as diversity in teaching methods.

For parents with high school students who are about to enter college preferred school grades to speaking skills. So, they invested in tutoring, leading to a huge burden in costs when compared to middle school parents. Most of the high school students, since some students received private lessons, they attended English classes as small group. The person who decides whether or not to participate in private education thought that middle school parents were students, but high school students were cooperative and could find the difference. Parents of middle school students believed that an English language educator must not only be qualified in the language but also have the interest and care towards children, but

for high school parents, having to prioritize grades over anything else, believed that apart from qualifications, the sense of responsibility was equally important.

Fathers were aware of the importance of English grades yet the final word in making decisions regarding the private education was entirely the mothers. Also, at home it was discovered the importance of English was emphasized in greater strength by fathers, but teaching methods were more familiar to the mothers, and mothers were found to be more action oriented regarding private education.

한은지

조선대학교 일반대학원 영어교육 전공 박사과정

사교육 시장에서 영어를 가르치고 있으며, 현장의 목소리와 니즈를 파악하고자 이와 같은 주제로 논문을 설계하고 연구를 진행하였음. 더 나은 영어교육을 위해 그리고 실제 교육 환경에 필요한 연구를 진행하고자 힘쓰고 있음.

김경자

조선대 영어교육과 교수

관심분야: L2 학습동기를 비롯한 제 2언어 습득이론 및 연구방법론

# Examining Parents' Perceptions of Private English Education (영어 사교육에 대한 학부모의 인식 조사)



Chosun University  
Eun Ji Han & Kyung Ja Kim

## I. 서론

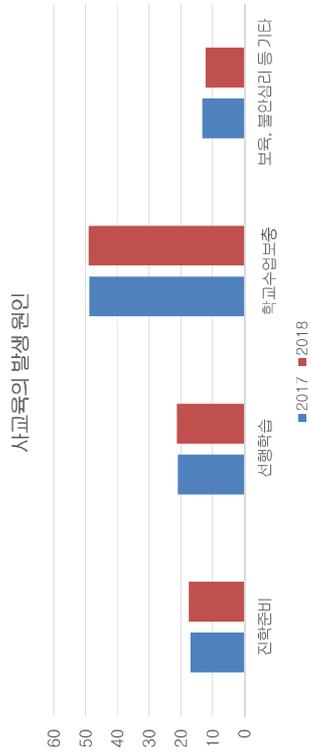
### 연구 목적

중,고등학교 자녀를 둔 학부모를 대상으로 하여 중학생 학부모와 고등학교 학부모의 자녀의 영어 사교육에 대한 인식을 혼합연구를 통해 조사해보고 어떤 차이가 있는지를 살펴볼 것이다.

### 연구 문제

1. 학부모의 자녀 영어 사교육에 대한 전반적인 인식은 어떠한가, 중학생과 고등학교 자녀를 둔 학부모의 인식에 차이가 있는가?
2. 어머니와 아버지의 영어 사교육에 대한 인식은 어떠한가, 차이가 있는가?

## II. 이론적 배경 - 영어 사교육의 발생 원인

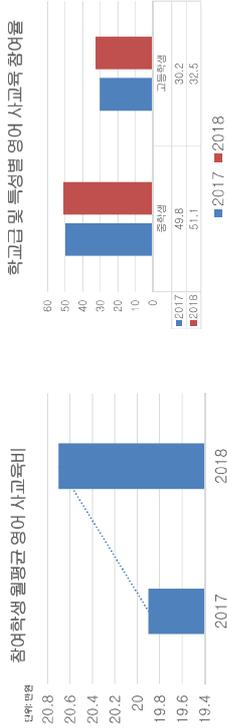


## II. 이론적 배경 - 영어 사교육의 유형별 장·단점

유형	장점	단점
영어 과외	<ul style="list-style-type: none"> <li>• 수준별 개인 맞춤 지도 가능</li> <li>• 전문적인 교사가 지도</li> </ul>	<ul style="list-style-type: none"> <li>• 영어 사교육비의 부담</li> </ul>
영어 학원	<ul style="list-style-type: none"> <li>• 의사소통 능력 향상</li> <li>• 단계별로 구성된 교육과정</li> <li>• 양질의 교육 서비스 제공</li> <li>• 수행평가, 내신 완벽대비</li> </ul>	<ul style="list-style-type: none"> <li>• 문법과 독해 위주의 주입식 교육</li> </ul>
영어 학습지	<ul style="list-style-type: none"> <li>• 교유비가 저렴</li> <li>• 1대1 맞춤 수업 가능</li> <li>• 학부모 수업 정관 가능</li> </ul>	<ul style="list-style-type: none"> <li>• 자기주도적 학습이 이루어져야 하며, 정해진 기간 안에 학습지를 끝내야 하므로 학습 무진야의 학습 효과 기대 어려움</li> </ul>
온라인 영어 학습	<ul style="list-style-type: none"> <li>• 학습자 수준에 맞춰 수업 난이도 조절 가능</li> <li>• 동영상, 게임과 같은 다양한 학습 자료</li> <li>• 시간이나 장소에 구애받지 않음</li> </ul>	

## II. 이론적 배경 - 영어 사교육의 실태

## II. 이론적 배경 - 외국인 학습에 영향을 미치는 요인



- (1) 학부모의 경제력
- (2) 학부모의 학력
- (3) 학부모의 태도

## III. 연구 방법

### 3.1 연구 대상

- 설문조사  
광주광역시에 거주하는 중·고등학생 자녀를 둔 어머니와 아버지 (총72명)
- 면담  
중학생 학부모 3명, 고등학생 학부모 3명

## III. 연구 방법

### 3.2 연구 도구 - 영어 사교육에 대한 학부모의 인식 설문

영역	문항 내용	문항 수
영어 교육에 대한 태도 및 인식	영어 교육 목적, 영어에서 가장 중요한 분야, 영어에 대한 인식	5
영어 사교육의 실태 및 인식	영어 사교육의 필요성, 사교육 여부 및 유형, 사교육비 지출, 사교육을 시키는 이유 등	9
영어 사교육에 대한 태도	영어 사교육에 대한 만족/불만족, 사교육 환경, 학부모의 사교육 관여도, 담당 교사의 지질 등	7

총 문항 수=21

### III. 연구 방법

#### 3.2 연구 도구 - 영어 사교육에 대한 학부모

상위 영역	하위 영역
영어 교육에 관한 전반적인 태도 및 인식	영어교육 목적
	영어 교육에 대한 관심
영어 사교육에 대한 인식	선택 이유 및 기준
	실태
	효과
	담당 교사의 자질



### IV. 연구 결과 - 중학생과 고등학생 학부모의 영어 교육과 사교육에 대한 인식

공통점	중학생 학부모	고등학생 학부모
영어교육의 목적	의사소통능력 향상	내신 향상
영어 사교육비의 부담	X	O
영어 사교육의 참여여부 결정지	학생	부모 공동
사교육 담당 교사의 자질	영어에 대한 지식과 학생에 대한 사랑	영어에 대한 지식과 영어 교육의 책임감



### IV. 연구 결과 - 영어 사교육에 대한 어머니와 아버지의 인식의 차이

	어머니	아버지
영어 사교육의 참여여부 결정지	어머니에게 더 많은 결정권이 있었음	
영어 사교육 수임방식	어머니가 사교육 수임내용과 방식을 잘 알고 있음	
영어의 필요성	기장에서 아버지가 더 자녀들에게 필요성을 강조	
영어 사교육에 불만족하는 이유	자녀가 원하지 않기 때문에	비용 면에서 부담이 되기 때문



## 카카오톡메신저와 온라인화상회의 Zoom을 활용한 ‘교실영어’ 수업 연구

오마리아  
(전주교육대학교)

The purpose of this study is to understand how elementary pre-service teachers practiced English at a Kakaotalk-and-Zoom-based ‘Classroom English’ class. The study participants were 50 primary pre-service teachers who took the class in Spring and Fall 2020 at a teachers' college in Southern Province, South Korea. A teacher-researcher planned and lead the class for one full year in 2020. She also collected, saved and analyzed the research data collected mostly from Kakaotalk messages, students' weekly homework assignments and videotaped Zoom classes. All the data were saved at the researcher's computer, and they were printed to be analyzed at later stages of the study in December 2020. The following four study results emerged: (1) At the class, some of the student participants were very active; most of them were active; and some took part in the class quite passively; (2) At the class, Kakaotalk was used as a communication method to discuss how to talk, act and perform well as a primary school English teacher; and Zoom was used as a way for the teacher-researcher to give a lecture on how to teach primary students effectively; (3) Most of the participants felt more comfortable in later stages of the study than initial stages while communicating in English, and they claimed more ownership of English at later stages; (4) Many participants said Kakaotalk-and-Zoom was good for them to practice writing and reading, but not good to practice speaking and listening. Some liked online activities were effective to review the lesson whenever they wanted. Almost all of them preferred face-to-face ‘Classroom English’ class to an online one and they missed microteaching chances at a real time face-to-face class with other classmates. Based on the study results it is suggested that offline and online English activities need to be utilized in a well-balanced-way at ‘Classroom English’ class even when Covid19 crisis is gone. It is also suggested that English teaching at a face-to-face classroom needs to be assisted or replaced by a small-group or an individual English coaching at a consulting place to make English-teaching and English-learning more effective.

오마리아 교수는 약 20년간 초등학교 교사를 양성하는 전주교육대학교에서 ‘영어교

과 교수법' '멀티미디어 활용 외국어교수법' '교실영어' '영어권 문화 이해를 돕는 초등수업' '영어권 문학과 초등영어교육' 등을 가르치고 있습니다. 평생에 걸친 연구 주제로는 '한국인들의 영어 학습자 자율성' '멀티미디어 활용 언어학습' '글로벌영어 화자로서의 한국인' '영어로 진행되는 영어수업' 등입니다. 최근에는 '교육과정 개발자로서의 교사' '예비 초등영어교사의 영어 학습자 자율성' '한국 영어교육에서 교사 자율성,' '대학 온라인 영어수업' 주제에 관심을 가지고 관련 연구를 수행하고 있습니다.



## 연구 과제

- 연구과제3: 카카오톡 메신저와 줌 활용 온라인 '교실영어' 수업에 참여한 예비 초등교사들의 영어에 대한 주인의식은 어떻게 변화하는가?
- 연구과제4: 연구참여 학생들은 대면 수업과 비교하여 카톡/줌수업의 장단점은 무엇이라고 생각하는가?

## 연구 제한점

- 본 연구는 지방 교대에 재학하는 학생들이 '교실영어' 수업을 수강하는 중에 연구가 진행되었다. 봄학기에는 출석체크를 카톡투표하여 확인하였으나 출석체크만 하고 수업활동참여를 하지 않는 학생이 있어 가을학기에는 출석체크 없이 수업참여자만 연구대상이 됨. 수업활동이 때우 제한적이었던 학생들은 연구에서 제외됨.

## 연구방법론

- 예비 초등 영어교사 (교대 2학년) 50명. 나이는 대부분 20대.
- 적극적인 참여자 (active participant)로서 교수 겸 연구자, 카카오톡(이하 카톡) 수업을 계획하고 실행하고 카톡 수업과 수업결과물, 연구자와 개인 학생과의 카톡 대화 수집 모반 분석함. 코로나사태로 강의 계획서 변경함
- '교실영어' 수업은 교대 2학년생 모두에게 필수 수업. 일주일에 한번 50분 수업 한 학기 15주. 두 학기가 통합수행됨. 연구자료는 첫째, '교실영어' 실시간 수업이 진행되는 2020년 봄학기과 가을학기 카톡 수업 내용. 둘째 교수학생간 개인 카톡 내용. 셋째는 대학 온라인 플랫폼에 수집된 주별 과제물.

## 수업진행

- 1. 교과서 내용 일차 소개
- 2. 다양한 유튜브 동영상으로 유초등 영어수업 시연 시청, 아동 제1, 제 2 언어 발달 시청
- 3. 기본 문형을 노래와 팬트로 익히기 유튜브 동영상 시청하고 익혀서 수업시연에 쓰기
- 예: <https://www.youtube.com/watch?v=W3-ldBv3i2s>
- <https://www.youtube.com/watch?v=Nlk1-ck4c6Q&t=5s>
- 4. 강의용 줌, 교수학생 소통은 카톡
- 5. 과제는 대학 온라인 플랫폼에 제출, 평가

## Textbook: English for Primary Teachers (Slattery & Willis, 2001)

- ▶ [https://books.google.co.kr/books/about/English\\_for\\_Primary\\_Teachers.html?id=BMtAmwqyI6wC&printsec=frontcover&source=kp\\_read\\_button&redir\\_esc=y#v=onepage&q&f=false](https://books.google.co.kr/books/about/English_for_Primary_Teachers.html?id=BMtAmwqyI6wC&printsec=frontcover&source=kp_read_button&redir_esc=y#v=onepage&q&f=false)

## 결과1: 학생 참여도

- ▶ 학생별 참여도 차이: 참여가 활발한 소수와 참여가 중정도인 대부분, 참여가 매우 미미한 소수
- ▶ 정보 찾기 질문에는 매우 활발하게 참여. 찾은 정보를 바로 업로드하거나 찾은 정보를 자기 글로 소개함
- ▶ 매 수업마다 코로나사태 상황 질문에 매우 활발한 반응. 학생들의 반응을 이끌기 위한 적절한 질문이 중요함이 드러남

## 결과2: 수업 중 카툰과 줌 활용법

- ▶ 교수법이나 정보 강의용 줌
  - ▶ 교수학생간 의사소통 수단용 카툰:
- “수업 관련 자료에 대한 동영상 시청이 가능했던 점, 사진을 전송할 수 있다는 점, 수업 내용 관련 뉴스 기사를 찾아보거나 관련 내용을 검색해볼 수 있다는 점 등이 있습니다. 또한, 영어글자를 눈으로 보고 읽을 수 있다는 점이, 수업 내용이 흘러가면 놓칠 수 있다는 점을 보완해주어 좋습니다.”

## 결과3 영어에 대한 주인의식

- ▶ 대부분 연구 초에 영어는 자기 것이 아니라고 하였고 연구 말기에는 영어가 자기 것이라고 답함
- ▶ 소수는 영어말하기 실력이 낮아서 “영어는 내 것”이라고 말하기 어렵다고 답함
- ▶ 모두는 연구 말기에 좋은 초등영어교사가 되기 위해 영어를 열심히 연습할 것이라고 다짐

## 결과4: 줌, 카톡, 대면수업 만족도

- 강의 용 줌, 대화용 카톡 온라인 활동에 대체로 만족하지만 직접 보면서 듣고 말하는 활동이 부족하여 아쉬움
- 코로나사태 후 대면수업에서 영어말하기 듣기 중심 '교실영어' 수업에서도 온라인활동이 적절하게 혼용되기를 기대

## 결론 및 제언

- 장차 코로나사태 이후 온라인 영어수업은 오프라인 영어수업과 함께 반드시 병행되어야 함
- 온오프라인 영어활동의 특징점을 최대한 활용하여 온오프라인 영어수업에서 효과적으로 활용하기 위한 다양한 연구와 실천사례가 개발되어야 함
- 장차 영어수업은 다수 대상의 교실수업 중심보다는 소수대상의 온오프라인 영어학습코칭으로 대체되어야 함

경청해 주셔서 감사합니다

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