

Sentence Completions with Digital Video Task: From Theory to Classroom Practice

Rong Liu^a, John Unger^b, & Sarah Schlueter^c

^aRong Liu is an Associate Professor at Georgia Gwinnett College ^bJohn Unger is a retired Professor at Georgia Gwinnett College

^cSarah Schlueter is a Professional Tutor at Georgia Gwinnett College

ABSTRACT

Adopting Tomasello's (2003) usage-based language acquisition theory, this case study presents sentence-completions-with-digital-video as a potential task to enhance language learning. Data were collected from two students who were enrolled in a college-level English for Academic Purposes course. In the sentence-completions-with-digital-video task, students completed a sentence with a target academic word and created another sentence that supports the meaning of the word. Students then recorded a digital video explaining how and why the first sentence supports the second sentence. A detailed analysis of the exemplar cases showed that the task helped students learn the academic word and cohesion, and gave students opportunities to detect errors. The limited data also show evidence of metacognition under the framework of Scribner's (1997) Conceptual Levels. The action-oriented case study provided preliminary evidence that the sentence-completions-with-digital-video task can be a useful teaching tool to promote vocabulary learning, sentence cohesion building, and metacognition cultivation.

Keywords: *sentence completions, Digital Video (DV), usage-based language acquisition, metacognition*

CONTACT: Rong Liu, Associate Professor at Georgia Gwinnett College, Lawrenceville, GA, U.S.A.; rliu@ggc.edu.

Introduction

Addressing the needs of linguistically diverse students transitioning to college is a well-known challenge (e.g., Kamaşak, Sahan, & Rose, 2021; Kleine & Lawton, 2015). Almost a decade ago, in an effort to better understand adults learning English as an additional language, we began to research how digital video serves as a pedagogical tool for multilingual learners in areas such as reading, writing for summaries, responses, and essays (e.g., Liu, Unger, & Scullion, 2014; Unger & Liu, 2013; Unger, Liu & Scullion, 2015; Unger & Olifer, 2019). This paper extends the past research into integrating digital videos into sentence completion tasks in English for Academic Purposes (EAP) courses to promote vocabulary learning, which is crucial for language acquisition (Yang & Coxhead, 2020).

Our intention here is to share the sentence completion data and show how sentence completion tasks, together with digital video cameras, can provide an effective task that can help students understand sentence cohesion, and vocabulary. Another benefit is that it can be a way to improve students' *metacognition*, with an emphasis on *self-regulation*. We will define these terms in more detail shortly. For this paper, the focus is on two participants enrolled in English for Academic Purposes courses over the course of one academic year.

Multiple learning objectives have guided the use of video cameras at the sentence-level. These include learning college-level academic vocabulary, producing context clues, editing sentence grammar and cohesion, and improving metacognition and self-regulation, which are important for student success in higher education.

We will begin with the adaptation of Tomasello's "*Usage-based theory of language acquisition*" and other supporting theories (van Lier, 2004; Vygotsky, 1998; Wertsch, 1998). This will be followed by the relevant literature review, methodology, the presentation of the data,

discussion and conclusions. To make this interpretive, descriptive case study more transparent, we invite readers onto a webpage with the videos, documents, the basic directions, and other materials (see Data section for the link). Our intention of providing the materials is that readers can draw their own conclusion if needed. We believe transparency is key to validity and reliability of case studies because transparency makes it possible for the procedures and tasks to be repeated or adapted in different learning contexts.

Theoretical Background and Literature Review

Signification, mediation, and ideas from semiotics inform our use of Tomasello's (2003) and others' ideas (Vygotsky, 1978; van Lier, 2004; Wertsch, 1998) for classroom activities, and our perspective on language acquisition and learning. Signification refers to the process of giving meaning to the self, objects, others, and the environment we live in (Lakoff & Johnson, 1999; Vygotsky, 1978); Mediation is the use of concrete and abstract objects and ideas, including language (i.e. signs) to organize, plan, and complete goal-directed activity (Vygotsky, 1978; Wertsch 1998). The digital video activity is an ideal tool to promote language acquisition because it creates opportunities for students to assign meaning to new words, use target words to communicate and create meaning among students.

Tomasello (2003) proposed a usage-based approach to language acquisition, which states that children acquire language through two major skills: "intention reading" and "pattern-finding" (p.4). Children, in communication, develop the ability of realizing the goals or intentions of other speakers using utterances or signs to achieve social functions, which is the functional dimension of the usage-based approach. The other dimension is grammatical, which happens when children capitalize their pattern finding skills to extract linguistic constructions from language input. Some notable points about usage-based Second Language Acquisition (SLA) are: 1.Communicative

function comes first in SLA; for example, infants at very early months begin to more carefully track others' intention toward a third entity; they communicate by pointing to objects to declare intentions. Speakers understand the intentions of others' use of signs or symbols as used by Tomasello. 2. Speakers create Joint Attentional Frames: they use signs to direct another's attention and influence the behavior and actions of others through the establishment of an intersubjective space. When designing the current classroom practice, we attempt to ensure that students create Joint Attentional Frames (Tomasello, 2003) by using a visual (poster), speech, and the act of pointing in the sentence completion task (see Unger, 2016, for more). Students also pair up and teach each other. The paired digital video teaching activity affords learners opportunities in intention reading through understanding, and pattern-finding through discussing the sentence structure, which promote language development. Specific procedures will be introduced in the methodology section.

Some differences exist in these definitions (Reyne et al., 2014), however, metacognition is generally understood as awareness of one's cognition; how one is thinking about a task; self-regulation is identifying areas for improvement and self-correcting to complete a task. Many studies have established that metacognition directly contributes to second language reading (e.g., Bjørke, Bjørke, & Dypedahl, 2018; van Gelderen, Schoonen, Stoel, de Glopper, & Hulstijn, 2007). The ability to plan, monitor and evaluate one's mental activities in reading comprehension and language learning is essential in language acquisition. Graham (1997) and Zhang & Zhang (2019) stated that metacognitive strategies are of central importance in learning, especially the ability to choose and evaluate their own strategies and learning. Griffith and Ruan (2015) found that readers use strategies of evaluating including self-questioning, self-correcting, and reflecting. Readers with high metacognition have the ability to apply the knowledge in the higher order thinking

process while reading (Anderson, 2012). Teng and Reynolds (2019) found that metacognition and self-regulation affects learners' ability to learn vocabulary. More recently, Marantika (2021) reported a positive relationship between metacognition and learning outcomes among language learners. All the literature reviewed points to the importance of metacognition in language learning (e.g., Li, Hiver, & Papi, 2022).

The current sentence completion task coupled with digital video cameras has the potential to promote self-regulated learning and metacognition. Students are prompted to explain aloud their thinking process and are offered opportunities to self-correct and reflect on the sentences they have just created. In addition to following along with Tomesello's usage based approach (2003), the discrepancy reduction theory (e.g., Butler & Winne, 1995; Thiede & Dunlosky, 1999) maintains that learners apply monitoring in order to reach their desired goal, i.e., when detecting discrepancy between their current understanding and their goal, learners will restudy the material or redo the task. The learning or more learning happens when the discrepancy disappears. The current pedagogical task offers students opportunities to detect deficiencies in academic English and correct mistakes and learn.

The Study

Research Questions

Based on the theoretical framework and literature, the current case study aims to answer: How does the sentence completion task coupled with DV promote academic vocabulary learning and sentence cohesion building in EAP courses? How does the DV task promote metacognition and self-regulation?

Methodology

This study generally follows Yin's descriptive case studies (2009). Validity and reliability are grounded in transparency: all data (including video data and relevant documents) are provided at transitional-literacy.org (See below for the password). The study will compare and contrast two cases with a social-cultural perspective of second language acquisition and analyze the digital video data generated by participants.

Task and Procedures

Students in an English for Academic Purposes course completed the sentence completion activities as part of the classroom practice. The target words are all academic words from the Academic Word List (Coxhead, 2000), which is a gold standard for EAP students. Procedures of the activity involve the following five steps:

1. Pair up.
2. Each person chooses a different sentence to complete.
3. Complete the first sentence that is related to the vocabulary word.
4. Write another sentence that explains the meaning of the vocabulary word.
5. Teach your partner about the word. On video, while pointing at the sentence, read the sentences and then explain the relationship of the first sentence to the second to your partner.

Data

The data comes from two cases: Case Terri, a Vietnamese speaker; and Case Leonard, a Spanish speaker from Honduras. This paper presents these two cases for contrast propose to show the potential benefits of the teaching technique. Both cases enrolled in a college level English for Academic Purposes course, which focuses on academic vocabulary, academic reading, and academic writing. Students have practiced context cues such as giving examples, using synonyms

and antonyms to build sentence cohesion; Students have also created two DVs before completing the video tasks used in the paper. The current contrasting data are from three prompts. One example prompt is:

After the hurricane, the **volume** of relief supplies needed in Puerto Rico is_____.

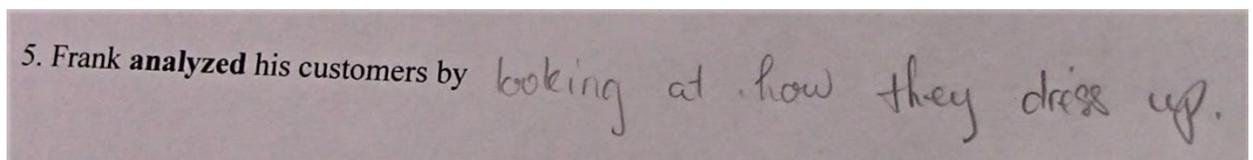
Here “volume” is one of the target academic words that students are learning in the lesson. Students completed the sentence related to the meaning of the target word and then wrote another sentence to support the meaning of the vocabulary.

Instructions to students are:

The ten questions start on the bottom of this page. Please only choose one question. Each of the group should choose a different word. Please revise errors and talk about the errors anytime during the entire process; this will help illustrate your critical thinking and ability to self-correct.

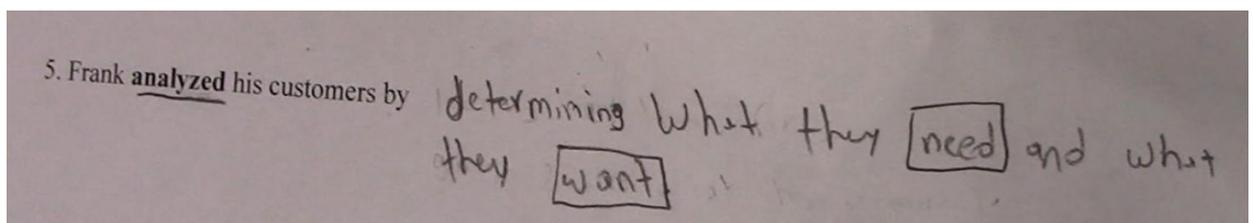
Case Terri and Case Leonard’s Visuals:

Figure 1 Case Terri’s Example Visual

A photograph of a student's handwritten response on a piece of paper. The text reads: "5. Frank analyzed his customers by looking at how they dress up." The word "analyzed" is printed in bold in the original image, and the student has written "looking at how they dress up." in cursive.

As shown in Figure 1, Case Terri’s answer on the visual is: Frank analyzed his customers by looking at how they dress up.

Figure 2 Case Leonard’s Example Visual

A photograph of a student's handwritten response on a piece of paper. The text reads: "5. Frank analyzed his customers by determining what they need and what they want." The words "need" and "want" are boxed in the original image. The word "analyzed" is printed in bold in the original image, and the student has written "determining what they need and what they want." in cursive.

As shown in Figure 2, Case Leonard’s answer on the visual is: Frank analyzed his customers by determining what they need and what they want.

VIDEO data for both the cases are available at <https://transitional-literacy.org/sentence-completions-with-digital-video-task/>. The password is otter21. Both students recorded a digital video using the visual while teaching each other the sentences they wrote. The digital video task also requires students to explain why the second sentence explains the first one. Below is the comparison of the two cases based on the three units of analysis: visual, reading of the sentences, and explanation of the sentences.

Table 1 Comparison of Case Terri’s and Case Leonard’s Visual, Reading and Explanation on “Analyze”

Prompt one: Frank analyzed his customers by _____. (Both Terri and Leonard)	
<u>Case Terri’s Sentences on the Visual</u> Frank analyzed his customers by looking at how they dress up.	<u>Case Leonard’s Sentence on the Visual</u> Frank analyzed his customers by determining what they need and what they want.
<u>Case Terri’s Reading of the Sentences</u> <i>Frank analyze his customer by looking at .* how they tress up.</i>	<u>Case Leonard’s Reading of the Sentences</u> <i>Alright, so Frank analyzed his customer by determin(ing) what they need and what they want.</i>

<p><u>Case Terri’s Explanation of the Sentences</u></p> <p><i>And um the subject is Frank an(d) analyze is the transitive verb analyze and . * so how how they dress up.. * Support to the analyze</i></p> <p><u>*Each period means a second delay</u></p>	<p><u>Case Leonard’s Explanation of the Sentences</u></p> <p><i>Alright, the verb is analyze and basic like he analyzed his customers customers is the direct object</i></p>
--	--

Table 2 Comparison of Case Terri’s and Case Leonard’s Visual, Reading and Explanation on “Mental” (Terri) v. “Promote” (Leonard)

<p>Prompt two: Frank built his mental strength by_____. (For Terri)</p>	<p>Prompt two: The best way to promote a product is by _____. (For Leonard)</p>
<p><u>Case Terri’s Sentences on the Visual (mental)</u></p> <p>Frank built his mental strength by trying to relax his mind. Frank read the book to building his brain.</p>	<p><u>Case Leonard’s Sentences on the Visual (promote)</u></p> <p>The best way to promote a product is by putting an advertising in the side of the road, every customer will see it when they drive by the road.</p>
<p><u>Case Terri’s Reading of the Sentences</u></p> <p><i>My best senten is Frank buil(t) his mental tren strength by trying to relak his mind. Frank reading the book to built his mind.</i></p>	<p><u>Case Leonard’s Reading of the Sentences</u></p> <p><i>The best way to promeite a product is by putting an abertizing in the sides of the road and um that way like every customer will see it when they drive by the road</i></p>

<p><u>Case Terri's Explanation of the Sentences</u></p> <p><i>Spurt the men mental..*brain (pointing at brain and then mental)</i></p> <p><u>*Each period means a second delay</u></p>	<p><u>Case Leonard's Explanation of the Sentences</u></p> <p><i>and this support like basically like to promote (circling the word using a pencil) and um putting an abertizing (circling those three words) thus basically like the supporting idea this promote (pointing at promote).</i></p>
--	--

Table 3 Comparison of Case Terri's and Case Leonard's Visual, Reading and Explanation on "Intercede" (Terri) v. "Settle down" (Leonard)

<p>Prompt three: The cat and dog were fighting until Frank interceded by _____. (For Terri)</p>	<p>Prompt three: Because Betty wanted to settle down somewhere peaceful, _____. (For Leonard)</p>
<p><u>Case Terri's Sentences on the Visual (intercede)</u></p> <p>The cat and dog were fighting until Frank interceded by yelling at them. Frank put the cat and the dog far away from each other.</p>	<p><u>Case Leonard's Sentences on the Visual (settle down)</u></p> <p>Because Betty wanted to settle down somewhere peaceful, she is in the island looking for a house.</p> <p>Because Betty wanted to settle down somewhere peaceful, she looked for a house on the island. (Revised version)</p>

<p><u>Case Terri's Reading of the Sentences</u></p> <p><i>The cat and the dog were fighting uniti Frank inter resked by yelling at them. Frank put the cat and the dog far away from each other.</i></p>	<p><u>Case Leonard's Reading of the Sentences</u></p> <p><i>hello this is my sentence um because Betty wanted to setteed down somewhere peaceful um she is in the island looking for a house.</i></p>
<p><u>Case Terri's Explanation of the Sentences</u></p> <p><i>um the main verb is the interkeides and the subject the cat and dog fighting.* This senten the second senten Frank put the cat and the dog far away from each other is the example for the word interreikes.</i></p> <p><u>*Each period means a second delay</u></p>	<p><u>Case Leonard's Explanation of the Sentences</u></p> <p><i>So my new sentences with the revision on it is because Betty want to seteed down somewhere peaceful she looked for a house so the thing I changed here was the in into on and I shange the sentences to she looked for a house because can not be she is after the comma. And for my subject is Betty want is transitive verb um to seteed down is the verb phrase somewhere peach is the direct object and she looked for a house on the island should be the object complement.</i></p>

Findings and Discussion

Examining the two students' work as shown in the above tables shows differences in their grammatical competencies; it is clear that Case Terri made more grammatical errors than Case Leonard. For example, Case Terri confused infinitive and gerund, when she wrote "Frank read the

book to building his brain”. The visual, in fact, does not demonstrate the striking contrast between the two cases as much as the reading of the sentences. Case Terri struggled to pronounce words so much that many words are not comprehensible. We sometimes had to rely on the visual to decode the speaking part. The tables also show that the two cases differ in the ability of explanation. Case Terri often only repeated what is on the visual and cannot expand the words or sentences beyond the written texts. For the last target word *intercede*, case Terri did a great job when recognizing “Frank put the cat and dog far away from each other” is one example of interceding. However, she was just reading the text rather than explaining why it is an example. In contrast, case Leonard did a much better job. For the target word *settle down*, case Leonard self-corrected mistakes and explained the rationale. For example, he changed the verb tense from the simple present tense to the simple past tense to be consistent with the previous part of the sentence “Because Betty wanted to”. He also fixed the preposition: changing *in* the island to be *on* the island; this is evidence that Leonard used the opportunity to detect errors and self-correct. Of course, case Leonard was not perfect. There were mistakes in grammar, pronunciation and explanations as shown in the tables. For example, he misunderstood what an object complement is when he misstated that “She looked for a house on the island should be the object complement” and also misstated that “somewhere peaceful is the direct object”. Those errors were very common among the EAP group and were expected because it requires sophisticated sentence structural knowledge.

The data above showed that two students understood the meaning of vocabulary and provided an explanation of the relationship of the two sentences they created. The task provides opportunities of deep processing the target word because students completed the sentence and wrote a second sentence related to the first sentence and orally explained to their peer. The digital

video task gave them chances to detect errors and self-correct. The task also prompted them to explain the logical relationship between sentences spontaneously.

Besides providing evidence of students learning the academic words and cohesion, the above data shows two other notable differences. Salient different acts of pointing were observed in the digital video. Those acts usually focused on the Gesture Stroke, i.e., the movement pathway of a person’s finger or hand. Certain types of repeated “beats” during moments of speech disruption are prominent in the data as well. The beats can be understood as the up and down movement gestures. Those beats often indicate a speaker is searching for a word or making an error. A certain type of confident synchronicity with many participants has been found in sentence-level videos, paragraph videos, brainstorming videos, and math word-problem data in our past research (e.g., Unger, 2016; Unger & Olifer, 2019). Case Terri often moved her pen abruptly and awkwardly and thus beats were not synchronized with her speech. Case Leonard’s pointing in general were more smooth and synchronized with his speech and the text and showed much confidence when doing so. A case in point is when case Leonard explained the word promote: he circled *promote* using his pencil and circled *putting* and then circled *an advertising*; finally he pointed at *promote*. The movement or beats were very smooth and happened while he spoke.

The data also shows evidence of metacognition and self-regulation. Using the theoretical Comparison of Conceptual Levels (Scribner, 1997, p. 179), we found that several salient differences exist between the two cases in metacognition. See below for the Conceptual Levels:

Table 4 *Theoretical Comparison of Conceptual Levels* (Scribner, 1997, p. 179)

Level 1 “Object” Concept	Level 2 “Word Object” Concept
1. Direct relationship to some object or	1. Indirect relationship to object; object

attribute of an object. Object of thought is an object.	is mediated by some other concept. Object of thought is a verbal concept (word).
2. Generalization on the basis of objects or attributes of objects; generalization of things.	3. Generalization of earlier generalizations (concepts) - therefore, generalization of thought.
4. We are aware of the object of thought, not of our mental activity.	3. We are aware of the act of thought.
5. Language internalized as inner speech regulates our behavior. Through language we become conscious of our behavior; we describe it and reflect upon it.	4. Written language that is internalized regulates our thinking. Through this new system of language, we become conscious of our thoughts; we can describe it and reflect upon it.

Case Terri is not moving much beyond the word in front of her, struggling with pronunciation of words, grammar, and more importantly her explanation of the logical relationship between the two sentences. This suggests she is most likely at Level 1 based on Scriber’s conceptual levels (1997) because her literacy skills are at the object concept level. For example, she said *Frank reading the book to built his mind* instead of *Frank read books to build his mind*. She struggled with the target word intercede and mispronounced it as *interreske* or *interkeide*. Moreover, she exhibits much less synchronicity with her pointing than Leonard. Case Leonard, in contrast, self-corrects more, and expands his explanation beyond the words immediately in front of him (see tables 1, 2 and 3 for the data). Also, he shows much more synchronicity with pointing. Applying Scribner’s Conceptual levels to our data clearly shows the contrast of Case Terri and Case Leonard. The overall analysis of Case Terri’s and Case Leonard’s visual, reading and explanation of the sentences suggest Case Leonard is functioning at a higher level of abstraction and language competency than Case Terri.

Limitations and Conclusions

Adopting a social-cultural approach to second language acquisition, the action-oriented study provided some preliminary evidence showing that the sentence completion task with digital video can be an effective teaching tool to promote academic vocabulary learning, sentence cohesion building, and metacognition cultivation. The DV data is very revealing about the competencies of the two cases. The visuals were not much different at first glance, however, the video data showed a stunning difference in the quality of grammar, structure and deep processing for the participants. As with most case studies, we acknowledge that the findings may have limited generalization. More data and research would be needed to strengthen the validity and reliability. We welcome and invite readers to access our website at <https://transitional-literacy.org/> and use the materials in teaching and research.

References

- Anderson, N. J. (2012). Metacognition: Awareness of language learning. In S. Mercer, S. Ryan, & M. Williams (Eds.), *Psychology for language learning: Insights from research, theory and practice* (pp. 169–187). London: Palgrave Macmillan.
doi:10.1057/9781137032829_12
- Butler, D. L., & Winne, P. H. (1995). Feedback and self-regulated learning: a theoretical synthesis. *Review of Educational Research*, 65, 245–281. doi:10.2307/1170684
- Coxhead, A. (2000). A New Academic Word List. *TESOL Quarterly*, 34(2), 213-238.
- Denzin, N., & Lincoln, Y. (eds.) (1998). *The landscape of qualitative research, theories, and issues*. Thousand Oaks: Sage.
- Eco, U. (1976). *A theory of semiotics*. Bloomington, IN: Indiana University Press.
- Graham, S. (1997). *Effective language learning*. Clevedon, England: Multilingual Matters.
- Griffith, P. L., & Ruan, J. (2005). What is metacognitive knowledge and what should be its role in literacy instruction. In E. Israel, C. Block, L. Bauserman, & K. Kinnucan-Welsch (Eds.), *Metacognition in literacy learning: Theory, assessment, instruction, and professional development* (pp. 3–18). London: Routledge.
- Haukås, Å., Bjørke, C., & Dypedahl, M. (Eds.). (2018). *Metacognition in Language Learning and Teaching* (1st ed.). Routledge. <https://doi.org/10.4324/9781351049146>
- Kamaşak, R., Sahan, K., & Rose, H. (2021). Academic language-related challenges at an English-medium university. *Journal of English for Academic Purposes*, 49, 100945. doi: 10.1016/j.jeap.2020.100945
- Lakoff, G., & Johnson, M. (1999). *Philosophy in the flesh*. NY: Basic Books.
- Levi-Strauss, C. (1966). *The savage mind*. Chicago: The University of Chicago Press.

- Li, S., Hiver, P., & Papi, M. (2022). *The Routledge Handbook of Second Language Acquisition and Individual Differences (1st ed.)*. Routledge. <https://doi.org/10.4324/9781003270546>
- Liu, R., Unger, J. & Scullion, V. (2014). Social justice through literacy: Integrating digital video cameras in reading summaries and responses. *Journal of Language and Literacy Education, 10*(2), 34-50.
- Marantika, J. E. R. (2021). Metacognitive ability and autonomous learning strategy in improving learning outcomes. *Journal of Education and Learning, 15*(1), 88-96. doi: 10.11591/edulearn.v15i1.17392
- Palincsar, A.S. & Brown, A.L. (1984). Reciprocal teaching of comprehension-fostering and comprehension monitoring activities. *Cognition and Instruction, 1*(2), 117-175.
- Rayne, Howard, Staley, & Dubois (2014). Metacognition and self-regulated learning constructs. *Educational Research and Evaluation, 10*(2), 117-139.
- Robbins, D. (2003). *Vygotsky's and A. A. Leontiev's semiotics and psycholinguistics: applications for education, second language acquisition, and theories of language*. Westport, CT: Praeger Publishers.
- Scribner, S. (1997). The cognitive consequences of literacy. In E Tobach, RJ Falmagne, M. Parlee, L Martin, and A.S. Kapelman, *Mind and social practice: selected writings of Sylvia Scribner* (pp. 160-189). New York, Cambridge University Press.
- Teng, F., Reynolds, B. L. (2019). Effects of individual and group metacognitive prompts on EFL reading comprehension and incidental vocabulary learning. *PLOS One, 14* (5). doi: 10.1371/journal.pone.0215902
- Thiede, K.W., & Dunlosky, J. (1999). Toward a general model of self-regulated study: an analysis of selection of items for study and self-paced study time. *Journal of*

Experimental Psychology: Learning, Memory, and Cognition, 25, 1024–1037. doi:
10.1037//0278-7393.25.4.1024

Tomasello, M. (2003). *Constructing a language: A usage-based theory of language acquisition*.
Cambridge, MA: Harvard University Press. Oaks, CA: Sage.

Unger, J. (2016). Shared attentional frames and sentence completion activities: A process based
approach to literacy assessment. *English Scholarship Beyond Borders*, 2(1), 58-120.

Unger, J., & Liu, R. (2013). Digital video cameras, main ideas, and supporting details: The
process and potential. *Journal of College Reading and Learning*, 44(1), 105-113.

Unger, J., Liu R., & Scullion, V. (2015). Language Competency as Semiotic Design: Attempting
to Cross Academic Borders with Digital Video Cameras. *English Scholarship Beyond
Borders*. 1(1), 1-51.

Unger, J. & Olifer, A. (2019). Analyzing math problems with digital video: A usage-based
approach. *English Scholarship Beyond Borders*, 5(1), 32-56.

van Gelderen, A., Schoonen, R., Stoel, R. D., de Glopper, K., & Hulstijn, J. (2007).

Development of adolescent reading comprehension in language 1 and language 2: A
longitudinal analysis of constituent components. *Journal of Educational Psychology*, 99,
477–491. doi: 10.1037/0022-0663.99.3.477

van Lier, L. (2004). *The ecology and semiotics of language learning: A sociocultural
perspective*. Boston: Kluwer Academic Publishers.

Vygotsky, L. (1978). *Mind in society: The development in higher psychological processes*.
Cambridge MA: Harvard University Press.

Wertsch, J. (1998). *Mind as action*. New York, NY: Oxford University Press.

Yang, L., & Coxhead, A. (2020). A corpus-based study of vocabulary in the new concept English textbook series. *RELC Journal*, 1-15. doi: 10.1177/0033688220964162

Yin, R. (2009). *Case study research: Design and methods (3rd ed.)*. Sage Publications: Thousand Oaks, CA.

Zhang D., Zhang L.J. (2019). Metacognition and self-regulated learning (SRL) in Second/Foreign Language Teaching. In: Gao X. (eds) *Second Handbook of English Language Teaching* (PP.883-897). Springer, Cham. https://doi.org/10.1007/978-3-030-02899-2_47