Enhancing Metacognitive Literacy: A Research Study Using Sticky Notes in the Classroom

Patricia Davis-Wiley
Professor, WL and ESL Education
The University of Tennessee
BEC 106, Knoxville, TN 37996-3442
USA

Deborah Wooten
Associate Professor, Literacy
The University of Tennessee
BEC 224, Knoxville, TN 37996-3442
USA

Abstract

For this study, the researchers used a note-taking strategy for their Literacy and ESL methods graduate students to interact with their assigned text readings using sticky-notes to document their experiences in order to think metacognitively during their literacy meaning-making process. (The theoretical framework of the study was based on Louise Rosenblatt's 1938 transacting with text research.) The results of a mixed-research method approach served to validate the efficacy of the authors' sticky note/interacting-with-text approach, suggesting that this method can become a universal teaching/reading/learning/reflecting and discussion-enhancing metacognitive strategy appropriate for all levels of post-secondary students.

Keywords: literacy strategy, interacting with text, critical thinking, metacognition

Sticky notes allow me to think in the moment and remember more about the text than if I were just summarizing in the end….[they] *grant me the freedom to express my thoughts, opinions, questions, and concerns with text that I might not have otherwise expressed.* (Student's comments on an end-of-semester survey.) Maybe we can create a pseudonym for her and add the date (Jill, May 2, 2012?)

1. Introduction

The student's candid comments above speaks to her perceived efficacy of a hands-on approach to interacting with written expository text, and one which the authors used with 21 graduate students in their classes over the course of an academic term. This article will describe a research study with these students that incorporated an interacting-with-text strategy as part of the requirements for their Literacy and ESL methods courses. Specifically, the research data were collected and analyzed in an effort to investigate the efficacy of this note-taking strategy when reading text as a potential useful learning tool that not would not only benefit them but would also be helpful to ultimately employ with their own students. Whereby it is assumed by post-secondary instructors that most students have been taught how to take lecture notes while in the lower grades (6-12), it has been the authors' experience that few students have been given little if any instruction on which are the best note-taking strategies to use while reading text assignments. Highlighting words and phrases and writing in the margins of a text page appear to be the most commonplace techniques for many students, but, are these the most effective techniques for internalizing, organizing and ultimately retaining the content of text? Can there be any lesson learned from looking at methods of teaching a particular type of text content? For decades, pedagogy for teaching literature and expository text was shaped by the New Criticism (Richards, 1929). The goal of this approach was to learn what the author/teacher intended for the reader to extract from text with no regard for knowledge and content he or she brought to the reading experience. It was not until the 1970s that Louise Rosenblatt (1978) began to change the landscape of literacy learning with her transactional approach of reading movement. During this era, her supporters viewed the act of reading as a subjective act rather than an objective one.

In the authors' opinion, this paradigm shift toward the transactional approach to reading continues to have a ubiquitous effect on literacy learning because it regards each reader and text as unique entities. Specifically, Rosentlatt's theory invites readers to connect their personal background knowledge and experiences, social and cultural stances, and context with what they are reading, thereby making the act itself personal and relevant to them in all respects. It was the authors' hypothesis that this theory could be potentially utilized in their own graduate literacy (i.e., reading) and ESL methods classes which subsequently inspired the present research study. This article provides both empirical research-based qualitative and quantitative evidence that supports the need to value and enhance students' personal interactions with assigned readings. This study also presents an effective literacy strategy that can be easily implemented with students across all grade levels, content areas, cognitive abilities and linguistic proficiency levels.

2. Review of Literature

Although students are expected to be proficient note-takers at primary, secondary, and university levels across the curriculum, very few of them have actually been taught the basic skills of note-taking (Boch & Piolat, 2005). Taking notes, especially during lectures, is regarded an exercise of transcribing, condensing, and employing techniques such as shortening words and using symbols. Educators know that one important aspect of taking notes is to ease the load on working memories so that students can address more complex thinking tasks. Boch and Piloat (2005) suggest that there are two major note-taking functions: recording and promoting reflection and it is this particular note-taking strategy that provides a platform for students to engage in both functions, of recording information along with an emphasis on reflection. One theory that supports this note-taking strategy (also called *interacting with text* in this article) is based on the work from Rosenblatt's transacting with text framework. Rosenblatt's (1938, 1978) pragmatic theory of reading as a transactional process postulates that interacting with a subject and an object constitutes a primal connective experience. One of Rosenblatt's axioms states that meaning does not reside in a book, but rather is created in the transaction between the reader and the text. When one reads, a world of complexities is ignited and then constructed in a meaning-making process that includes background knowledge, abilities, cognition, attitudes, cultural orientations, motivations, and preferences. Simultaneously, the text on the page guides and limits the meaning that a reader creates. When the information is recorded in a note-taking strategy from students' assigned readings, it is re-constructed as a result of the transaction that occurs between the reader and the text.

"Taking notes from text is…[an essential] requirement for successful performance in college and beyond" (Brown, 2005, p. 18), thus, the importance of Rosenblatt's interacting with text note-taking strategy that is designed so that students decide what they want to record as notes from an assigned text. They are encouraged to go beyond summarization and record reflective-type responses. Rosenblatt's theory honors the importance of what the person brings to the reading experience and is similar to how this note-taking strategy operates. When students refer to their notes (transactions) during discussions and share them with one another, the conversations become more reflective and consequently invite critical thinking. Rosenblatt's (1938, 1978) pragmatic philosophy of reading as a transactional process is grounded in Dewey's (1938) radical empiricism, which postulates that transacting with an object and a subject constitutes a primal connective experience. In the early 1960s, behavioral psychologist David Ausubel (1960) calls the concept of this connectivity of previous experiences to new ones *advance organizers* which he described as "bridg[ing] the gap between what the learner already knows and what he needs to know so that he can learn the task at hand" (Ausubel, Novak, & Hanesian, 1978, p. 148; glossary, p. 628). This is fine but Rosenblatt and Ausubel are from dynamically opposing camps. She would roll over in her grave if she saw this. LOL Engaging in the hands-on, active learning experience of deriving meaning from a text takes a student from passively reading an assignment to an entire different level of interactive, hands-on involvement. The skills required for this new note-taking strategy require the student to interpret, analyze and makes meaning from and connections to previous knowledge, which he/she then synthesizes into a sticky note and attaches it on the page of text that it refers to. It should be noted that whereby there are published articles on the use of sticky notes as a way to organize and annotate ideas, albeit not those reacting to or gleaned from reading a text (DiGiano, Tatar, & Kireyev, 2006; Karger, Katz, & Quan, 2003; Sibbet, 2010; Wolfe, 2002), there appears to be a dearth of published research studies documenting its use.

3. Methods and Procedures

The mixed-method approach used in the present study combines quantitative and qualitative research in order to utilize their complementary strengths. The student survey administered provides quantitative statistics and informal comments that were fused with formal student written reflections about using this approach (drawn from reflective student protocols), the latter of which serve as the qualitative method for data collection. The following section presents the research questions that guided the present research study, the subjects who participated in this study, the procedures for implementing the SNS, and the collection and analysis of the triangulated data.

3.1 Research Questions

The two research questions that guided this study were: How do students use an interacting with text strategy to react to assigned expository text readings? What are these students' perspectives regarding the use of this interacting-with-text strategy?

3.2 Subjects

Twenty-one graduate students, matriculating in two of the graduate classes (one in Reading Education and one in an ESL Methods class) taught by the authors, gave their permission to willingly participate in the research project, following Institutional Review Board (IRB) approval at the authors' home university.

3.3. Procedures for Implementation of the Sticky Note Strategy

The graduate students participating in the research study were instructed that they would take notes in their textbooks by using *sticky notes*[1] to record their comments and then adhere the sticky notes to the page which relates to their comments. Students were informed that their sticky note comments would not necessarily be summaries about the text but would include questions, connections, thoughts, ideas, and reactions. This method would be used in lieu of their typical manner of note-taking (i.e., highlighting, writing in the page margins), when reading assigned articles and books. This interacting with text note-taking method will be referred to as the *sticky note strategy* (SNS). During each class period, students were asked to refer to their sticky notes when they were pertinent to discussions. For some class discussions, the professor initially led discussion; in other classes, individual students were asked to lead whole group discussion; and in still others, small groups of students first discussed the assigned readings, and then reported back to the entire group. The professors did not establish a particular routine for text discussion but rather, attempted to vary the nature of this activity throughout the semester. The 2 ½ inch by 3 inch sticky note shown in Figure 1 contains an ESL Education graduate student's reflections concerning the text's presentation of phenomena known in principles of language transfer as metalinguistic awareness and common underlying proficiency. In the note can be seen the student's attempt to not only capture abbreviated definitions of SUP (i.e., separate underlying proficiency) and CUP (i.e., common underlying proficiency), and the researcher associated with them (Cummins, 1979, 1981), but also the fact that SUP contrasts with the notion of CUP. Additionally, the student who has interacted with this particular section of the assigned text reading is cognizant of the fact that one's primary and secondary languages share a common foundation, known as metalingistic awareness, which refers to one's knowledge of a language's sounds, words and grammar (Yaden & Templeton, 1986).

3.4 Data Collection Instruments

3.4.1 Reflection paper

Throughout the semester, students from one of the classes invited to participate in this study, were asked, as part of their regular assignments, to write a brief Reflection Paper[2] concerning their use of interaction with text assignments during the semester. This was a two-page paper in which students were able to voice their candid reactions ~~to~~ about the sticky note approach. Many students compared their initial reactions with those at the end of the semester.

3.4.2 Interacting with Text Protocol

At 2 to 3-week intervals, students were asked to complete a one page Interacting to Text Protocol (see Appendix A) worksheet. Students were instructed to work in pairs and not only discuss the strategy but also address the assigned content found in their textbooks. The purpose of this protocol was for students to have informal opportunities to reflect about the sticky note strategy and content and then share this information with their classmates in a small group setting.

3.4.3 Student Survey

At the end of the semester, the students were given the Student Survey (see Appendix B) to complete. It included a variety of ways that the interacting with text notes could be used, such as a tool to help one to focus, comprehend and have choices about what to record on the sticky note. At the end of the survey, students were invited to write other comments about the new strategy.

3.5 Data Analysis

3.5.1 Student Survey: Quantitative Data

The researchers analyzed the 12 four-interval scale items on the Student Survey in order to identify the frequency of response (i.e., mode) for each item. The 13th item, an open-ended question, was also analyzed qualitatively in an effort to identify any common themes that emerged, which were added to similar themes identified from other qualitative data collected from the subjects.

3.5.2 Student Survey: Qualitative Data

Following initial quantitative analysis of the Student Survey, the investigators entered all comments made by the subjects, throughout the semester, on the Interacting with Text Protocol, in addition to those from the students' Reflection Paper and at the end of the Student Survey into a WORD document. Then, a typological analysis[3] of these data (LeCompte & Preissle, 1993) was used to organize all data into categories, based on typologies informed by the research questions and themes and patterns (Hatch, 2003) which emerged from several careful readings of the Student Survey data. Although there are a number of computer software programs available for qualitative data analysis, the researchers preferred to personally hand-code and then word-process the data[4] in order to identify reoccurring themes and commonalities. These data were subsequently organized under the hierarchy of student themes identified by the Student Survey.

4. Discussion and Results

The results of the data from this research study were triangulated from three sources (student surveys, reaction paper, interaction with text student protocols) and analyzed both quantitatively and qualitatively.

4.1 Themes

Data analysis of the Student Survey revealed 11 themes that were later collapsed into 7 themes.[5] Table 1 reports these 7 themes along with the frequency of occurrences of student responses for each theme. *Text Defacing* (i.e., highlighting text and writing in the margins) was reported as the most important (83%) reason for using the interacting with text method and *Implementing* [the same method] *With Students* was identified as being the least important (50%) among all themes. This reaction by many of the research subjects was understandable due to the fact that they were primarily pre-service teachers. As such, they had not yet had actual classroom teaching experience with their own students at this point of their teacher preparation program and consequently had not thought about how they could use the sticky note strategy in a formal classroom setting with students.

4.1.1 Theme 1: Text Defacing

Students *strongly agreed* that interacting with text using the sticky note approach was an important way to not deface the pages in their textbook. One student commented that she enjoyed writing on sticky notes as a form of taking notes because she didn't have to mark in her book or keep up with other written notes. For her, writing on sticky notes was a less cumbersome method for taking notes with her assigned readings.

4.1.2 Theme 2: Strategy/Accountability

Students offered more commentary about how the interacting with text approach impacted their cognitive and social development than on any other theme. Some comments reflected metacognitive awareness resulting from their understanding of their thinking processes recorded on their sticky notes (Farstrup & Samuels, 2002), such as the following: *I find that when I use sticky notes during reading this has been a positive experience for me. I feel like I am evaluating my thinking while reading and checking for understanding. I also feel that it has strengthened my ability to summarize and pull out main points.* Another student points out that "using the sticky note approach gives me an opportunity to internalize and reflect upon the readings. After I read the text initially I then go back and reflect and clarify information." Students revealed that higher-order thinking skills resulted from using the sticky note approach: *The sticky note method is a visual tool and helps me to re-read my thoughts and ideas that I have written on my sticky notes.*

This is an essential reference tool that assists me when I need to apply new concepts into my own style of teaching. This comment clearly suggests that the student has internalized a comprehension strategy and has incorporated it into her teaching practices. Other comments from students indicated that they had used the sticky notes strategy in other courses and had shared this approach with their peers. Several students reported that using the sticky note strategy (SNS) supported their learning in additional ways, and stated that it: "keeps me organized;" helps me to focus when reading;" "supports my understanding and generation of new ideas;" "reminds me to pause and ask myself what I am reading about;" and "serves as an alternative note taking strategy." The students' comments clearly identify strategies that usher them into higher- order thinking skills such as self-monitoring themselves when reading helps them scaffold to think metacognitively because they are reminded during the process to pause and ask reflective questions.

4.1.3 Theme 3: Quick Notes/Quick Refresher/Note Referral

Student responses indicated that the SNS was an efficient tool that helped them locate information from their textbooks "…when I referred to my sticky notes they helped to draw my attention to the important and interesting parts of the textbook." In this example, the sticky notes served as a visual, tangible signal that guided this student to key information. Furthermore, research subjects also reported using the sticky notes as a medium for "keeping and storing…thoughts of what each section of the books [*sic*] or page contains to review later." Not all students, however, used this method in the same way, and one student in particular said that what was recorded on the sticky note was determined by the relevance the reading had with her classroom practices. This comment along with others in the study illustrate that motivation is increased when students have opportunities to make choices because they have a sense of autonomy when completing assignments (Gambrell, 2011). Some students used sticky notes of various colors as an organizational tool: for example, yellow for comments, green for teaching ideas that could be used in their classrooms and blue for questions needing clarification. Students stated that when their sticky notes extended somewhat beyond the edges of their textbooks, they became tabs useful in locating information in the text.

4.1.4 Theme 4: Freedom

Providing students with choice about what to write on their sticky notes is a motivational tool. When many thoughts are read, ideas, and connections form during the process. This approach honors Rosenblatt's theory about what a reader brings to text is of paramount importance. The comments below from the Student Survey illustrate the value of the personal conscious flow students have when they are transacting with text. *Sticky notes allow me to think in the moment and remember more about the text than if I were just summarizing in the end. Sticky notes grant me the freedom to express my thoughts, opinions, questions, and concerns with text that I might not have otherwise expressed.* When students can write about their reading in ways that relate themselves to the text, this helps them "unravel their transactions so that they can see how they understand and, in the process, …. elaborate, clarify, and illustrate their responses by reference to the associations and prior knowledge that inform them" (Petrosky, 1982, p. 24).

4.1.5 Theme 5: Connect/Memory

Writing on the sticky notes as a form of note-taking from texts helps students remember information more readily from what they have read. In fact, " recording notes …focuses students' attention, aids learning of the processed text, and promotes retrieval from memory" (Anderson & Armbruster, 1984, as cited in Brown, 2005, p. 1). And, this is just what using sticky notes has accomplished for the student subjects who have found this technique useful for connecting already-learned information with new information. The students reported, *I use sticky notes to self-organize my thoughts and make connections to other previously- learned material.* [Using sticky notes helps me connect]*… to what I'm reading with other info that is learned from other classes.I find myself writing down connections to previous experiences, to help me enhance and understand new ideas, words, and concepts.*

Interacting with text using this strategy also helps students stay focused and assists in scaffolding new information onto old information. In fact, it might be said that using sticky notes may serve to bridge the *Zone of Proximal Development* (Vygotsky, 1978) gap between simply being able to read new information found in the text and being able to internalize and remember it for further use, as several students reported. *I find it much easier to remember the main ideas in a chapter or points that the author was trying to make because of my notes. Instead of flipping through the chapters to find a concept, I just generally have to find my post-it* [sticky note] *and then all of the thoughts and ideas that I had made simply come back to me.*

Storing information of any amount can be difficult. As I read, I have used the…[sticky notes]*to help me remember key point[s] throughout the reading.* This student has personally created a memory tool that helps her to retrieve information when needed. She has written the surface layer of information on her sticky note so that this can precipitate higher-level thinking skills such as conceptual learning. Another subject finds this method particularly useful in her busy life as a classroom teacher and part-time graduate student. *The* [sticky note] *is a visual tool for me because being a graduate student and a full time special education teacher can cause some 'memory lost.' Using the visual tool, the post-it* [sticky] *notes, I can re-read what thoughts or ideas I had written down.* The authors feel (this is present tense…. Should it be past tense,,, felt?) that one reason this strategy is especially helpful when retrieving and remembering information is because the sticky note is placed on the page where it originated. This provides the context for the comment written on the sticky note so that the source can be easily ascertained.

4.1.6 Theme 6: Improves Discussion

The researchers left the subjects to devise their own way of using sticky notes with assigned readings, yet, some students actually shared their individual styles with others as their own approaches evolved. *While talking with my classmates, and listening to how they use post-its* [sticky notes], *my own approach has expanded and began to include new uses. I used to highlight large sections and write down a major point and leave it at that, but now I tend to delve deeper*. Students also reported on the Student Survey being motivated to use the sticky notes from the desire to understand content that they discuss in class. *The* [sticky notes are] *a great tool*. *During a discussion you can flip through* [them] *until you recognize the appropriate post-it and refresh your memory. It makes discussions easier. Instead of searching for specific points all I have to do is look at my…*[sticky notes]. Moreover the professors observed that students would refer to their sticky notes to help them remember what was in the text. It was as though the sticky note served to personally catalogue information in the text. When students did find what they were looking for during discussions, many of them would fan through the pages with sticky notes so that they would refresh their memory and contextualize their comments.

4.1.7 Theme 7: Implement with Students

It is the hope of all professors in Teacher Education to model useful strategies that will facilitate learning in higher education classes with students who teach in the K-12 arena. Particularly noteworthy in the present research is the fact that the students participating in this study expressed the desire to use this same strategy with students in their own classrooms. Thus, theory can actually become practice, as evidenced by comments of students who used the sticky-note strategy with her own classroom students.…[sticky notes] *provide an assessment tool with my students. I can analyze how my students are responding to text. By gathering this information, I can alter my teaching style so their readings target them to become more aesthetic readers.*By using the sticky-note strategy to guide her instructional lessons, this teacher gains a better understanding of students' needs and consequently creates a more efficient and effective learning experience for them. Teaching with the SNS can help teachers differentiate instruction.

…[I also] *like to incorporate post-its within the class, whether it is for Spelling, Reading, or even Math. Students should use different tools to enhance their…[personal styles]. I believe every area can benefit from the use of post-its. The…* [sticky] *notes also provide great prompts for children to write about their own experiences or ideas….*[and] *provide a platform for students to share their ideas and experiences with each other, while preparing something visual for the students.* The two testimonials indicate that by employing the SNS, multiple subject areas beyond reading are permeated. This note-taking strategy is especially helpful when reading content area textbooks because most are written two or more years above grade level (Chall & Conard, 1991; Budiansky, 2001). The sticky-note strategy makes reading challenging textbooks a visually appealing and friendlier experience.

5. Conclusions/Implications

The results of this study do strongly reflect and also corroborate the research of Rosenblatt and support her mantra of enabling the reader to personally react to text, and thus, expand the reader's personal strategies for deriving meaning from text. In the present research study, the student subjects were truly able to utilize this sticky note approach to interact with text, over the duration of an entire semester, so that they could better use and adapt it to meet their own personal learning styles. By extension, they will be able to model it for the students in their own classrooms.

Also found as a result of this study was the fact that people can be empowered by embracing the interacting with text approach and thus be truly in control of their own learning, which will become a life-long strategy and will promote critical pedagogy. An added benefit found by the researchers was that two of the participants who were second language learners reported that using the SNS enabled them to organize their thoughts efficiently in English and prepare them to fully participate in whole group discussion.

6. Limitations and Recommendations

As is true of all research studies, the present one has its own inherent limitations. Only 21 subjects participated in the study at one university for a period of one academic semester. Additionally, data were gathered from only three primary sources. It is strongly suggested for subsequent studies that there be a larger and more diverse group of participants (including second language students), representing undergraduate and graduate students and in a variety of content areas. These subjects could also participate in more interactive qualitative activities, including interviews with the researchers. Therefore, the results presented here cannot be generalized to all populations although they can most certainly inform the body of published research on the topic that was examined in this article. Based on this experience and the findings reported in this study, the researchers feel that more research is needed in order to investigate the evolutionary process students experience during transacting with text using the sticky note approach. In order to buttress this effort, an examination of students' actual responses written on their sticky notes, along with discourse analysis of recorded discussions resulting from the implementation of interacting with text using the sticky note approach, is needed in order to yield more generalizable results.

7. References

Anderson, T.H., & Armbruster, B. B. (1984). Studying. In P.D. Pearson, R. Barr, M.L. Kamil, & P. Mosenthal (Eds.), Handbook of reading research (pp. 657-680). New York: Longman.

Ausubel, D. P. (1960). The use of advance organizers in the learning and retention of meaningful verbal learning. Journal of Educational Psychology, 51, 267-272.

Ausubel, D. P., Novak, J. D., & Hanesian, H. (1978). Educational psychology: A cognitive view. New York: Holt, Rinehart, & Winston.

Boch, F., & Piolat, A. (2005). Note taking and learning: A summary of research. Writing Across the Curriculum, 16, 101-113. Retrieved from: wac.colostate.edu/journal/vol16/boch.pdf

Brown, R. (2005). Seventh graders self-regulatory note-taking from text: Perceptions, perceptions, and practices. Reading Research and Instruction, 44(4), 1-26.

Cummins, J.(1979). Linguistic interdependence and the educational development of bilingual children. Review of Educational Research, 49, 222-251.

Cummins, J. (1981). The role of primary language development in promoting educational success for language minority students. In Schooling and language minority students: A theoretical framework. Sacramento: California State Department of Education.

Dewey, J. (1938). The theory of inquiry. New York: Holt, Rinehart and Winston.

DiGiano, C., Tatar, D., & Kireyev, K. (2006). Learning from the Post-It: Building collective intelligence through lightweight, flexible technology. In Conference on Computer Supported Cooperative Work Companion, Banff. Retrieved from http://groupscribbles.sri.com/publications.html

Edelman, G. (1992). Bright air, brilliant fire: On the matter of the mind. New York, NY: Basic Books.

Farstrup, A., & Samuels, S. (2002). What research has to say about reading instruction. Newark, DE: IRA.

Gambrell, L. (2011). Seven rules of engagement: What's most important to know about motivation to read. The Reading Teacher, 65, 172-178.

Glesne, C., & Peshkin, A. (1992). Becoming qualitative researchers: An introduction. White Plains, NY: Longman.

Hatch, J. A. (2003). Doing qualitative research in educational settings. Albany: State University of New York Press.

Karger, D. R., Katz, B., Lin, J., & Quan, D. (2003, January). Sticky notes for the semantic web. In Proceedings of the 8th international conference on Intelligent user interfaces (pp. 254-256). ACM.

LeCompe, M.D., & Schensul, J. (1993). Ethnography and qualitative design in educational Research (2nd ed.). San Diego, CA: Academic Press.

Purves , A. C. (Ed.). How porcupines maker love: Notes on a response-centered curriculum. Lexington, MA: Xerox College Publishing.

Richards, I. A. (1929). Practical criticism. New York: Harcourt, Brace & World.

Rosenblatt, L. (1938). Literature as exploration. NY, NY: Modern Language Association.

Rosenblatt, L. (1978). The reader, the text, the poem: The transactional theory of the literary work. Carbondale: Southern Illinois University Press.

Rosenblatt, L. (1994). The transactional theory of reading and writing. In R. B. Rudell, M. R. Ruddell, & H. Singer. (Eds., 4th ed.). Theoretical models and processes of reading (pp.1057- 1092). Newark, DE: International Reading.

Rosenblatt, L. (2005). Making meaning with texts: Selected essays. Portsmouth, NH: Heinemann.

Sibbet, D. (2010). Visual meetings: How graphics, sticky notes and idea mapping can transform group productivity. Hoboken, NJ: John Wiley & Sons.

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

Wolfe, J. (2002). Annotation technologies: A software and research review. Computers and Composition, 19, 471-497.

Yaden, D., & Templeton, S. (1986). Introduction: Metalinguistic awareness---An etymology. In D. Yaden & S. Templeton (Eds.), Metalinguistic awareness and beginning literacy: Conceptualizing what it means to read and write (pp. 3-10). Portsmouth, NH: Heinemann.

8. Footnotes

[1]The students were given freedom to select whatever size, shape or color of sticky notes they elected to use as they reacted to assigned text readings. *Sticky notes* will be the term used in this paper to describe the adhesive-backed small paper notes used by the students.

[2]Mid-way through the semester, the students in one of the researchers' classes were asked to critically analyze a selected chapter in their textbook for the course. The assignment included reflecting on their personal descriptions of how transacting with text, using the sticky note approach, had impacted their teaching and learning experiences.

[3]According to LeCompte and Preissle (1993), typological analysis is defined as "dividing everything observed into groups or categories on the basis of some canon for disaggregating the whole phenomenon under study" (p. 257).

[4] It was tempting to use a software program to analyze the interviews. Glesne and Peshkin (1992), however, feel that, "The products of computer-assisted analysis are only as good as the data, the thinking, and the level of care that went into them" (p. 145).

[5]The themes Quick Notes, Quick Refresher and Note Referral were collapsed into one theme, the themes Connect and Memory into another theme, and Strategy and Accountability into another theme since the researchers felt that there was overlap in some of these combined themes that could best be reported as an aggregate of the whole rather than as separate thematic items.

Appendix A

Interacting With Text Protocol

Name _____ Date _____

Partner's Name _____

Discuss interacting and transacting with the assigned readings while employing the post-it [sticky note] approach. Share with one another your approach and what you have learned from the instantiation of this method.

A few questions to ponder:

- Are you writing about what you think is the most important points in order to remember them?
- Do you ask questions?
- Do you connect what you have read to other readings or experiences?
- Does the type (noting key points, reactions, connections) of comments written on your post-its [sticky notes] shift from one form of response to another and if so why?

Your partner's approach/reflections and comments:

Your approach/reflections and comments:

Appendix B

Student Survey

By completing this survey, I am giving my consent to be part of this research study. I realize that my identity will remain anonymous.

Please circle the answer which best fits you for items 1-13.

1. I am enrolled in: RDG ED 519 FL/ESL ED 476

By responding to written discourse in my text using a post-it [sticky] note, I feel that it…

2. holds readers accountable for what they have read in a non-threatening manner.
   [strongly disagree] 1 2 3 4 [strongly agree]
3. serves as a focusing strategy.
   [strongly disagree] 1 2 3 4 [strongly agree]
4. promotes readers to connect their background knowledge to what they are reading.
   [strongly disagree] 1 2 3 4 [strongly agree]
5. serves as a note that is attached t the page that can be referred to (i.e., the post-it [sticky] note is contextualized).
   [strongly disagree] 1 2 3 4 [strongly agree]
6. provides the freedom to respond to readings in a variety of ways.
   [strongly disagree] 1 2 3 4 [strongly agree]
7. helps one remember what has been read.
   [strongly disagree] 1 2 3 4 [strongly agree]
8. serves as an alternate note-taking approach that is quick and contextualized because the post-it [sticky note] is attached to the actual text.
   [strongly disagree] 1 2 3 4 [strongly agree]
9. provides an opportunity to write in the text without defacing it.
   [strongly disagree] 1 2 3 4 [strongly agree]
10. makes discussions about readings easier because I can refer to the post-its [sticky notes].
    [strongly disagree] 1 2 3 4 [strongly agree]
11. adds as a quick refresher to the text.
    [strongly disagree] 1 2 3 4 [strongly agree]
12. models a strategy that I can implement with my students.
    [strongly disagree] 1 2 3 4 [strongly agree]
13. Please comment upon your experience this past semester using the post-it [sticky] note-taking strategy.

Table 1: Collapsed Themes and Frequencies of Student Comments

Hierarchy of Student Survey Themes

Theme	Frequency of Student Comments
Strategy/Accountability	49
Connect/Memory	26
Quick Notes/Quick Refresher/Note Referral	13
Implement With Students	13
Improves Discussion	6
Text Defacing	3
Freedom	3

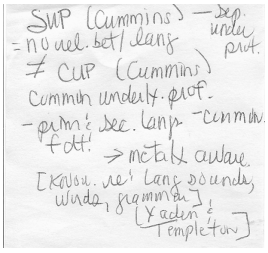

Figure 1: Sticky Note