

**The Computer-based Writing Program: A Clinical Teaching Experience for  
Education Interns to Develop Professional Knowledge and Skills in Effective  
Instructional Writing Practices**

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**Abstract**

The four-week university-sponsored summer Computer-based Writing (CBW) Program directed by the head of a special education initial teacher licensure program gave teaching interns opportunities to work with young struggling writers in a supervised clinical setting to address keyboarding skills, writing conventions and knowledge and application of the writing process. Following the Self-Regulated Strategy Development (SRSD) instructional model, the graduate interns explicitly taught their students writing and self-regulation strategies that included self-monitoring, self-instruction, goal-setting, and self-reinforcement. The purpose of this article is to describe how through their CBW experiences, the interns acquired content and professional knowledge, tested out best instructional, assessment and technology practices and developed critical reflective thinking needed for informing their instructional practice. The CBW experience provided direct community service to children identified as at-risk learners and to their parents who learned ways they can provide ongoing literacy and learning support for their children at home.

Providing clinical experiences that develop content and professional knowledge, accepted best instructional practices, dispositions that reflect practitioner research, proficiency with technology and assessment are essential components of our university's teacher education preparation programs. Directly collaborating with our partner school systems and community-based entities is another important initiative that promotes effective university-community connections that support K-12 students and their families. Central to the clinical training of teachers and establishment of meaningful community collaborations is

our education school's Center for Literacy. This center supports in part by a charitable foundation dedicated to enhancing educational opportunities for young people in our state. The intent of this article is to describe how through their CBW experiences, the interns acquired content and professional knowledge, tested out best instructional, assessment and technology practices and developed critical reflective thinking needed for informing their instructional practice. Through this clinical experience, interns provided direct community service with children identified as at-risk learners and to their parents who learned ways they can provide ongoing literacy and learning support for their children at home.

### **The Computer-based Writing Program**

Over a period of thirty years of writing research with students who receive special education services for learning disabilities or students recognized by their schools as struggling writers, Graham and Harris (2009) identified four factors that are essential for ineffective writers to develop to become competent writers. These factors are skills, knowledge, strategies and motivation for writing. Skills are writing conventions such as spelling, grammar, and transcription (handwriting or typing). Knowledge of writing refers to the genre, writing processes, and assignment topic. Strategies are approaches or steps taken to meet specific writing goals to produce quality compositions. Motivation, self-efficacy and developing a positive attitude are critical when developing a belief in writing ability and demonstrating a desire to write (Vue et al., 2015). Therefore, the purpose of CBW was to provide our graduate students with practical experiences that would help them determine effective ways that will help struggling writers develop skills, knowledge, strategies and motivation for writing.

## **Program Goals**

There were three goals for the CBW program. First, graduate students would have opportunities to work with struggling writers in a clinical teaching experience. Second, to help the graduate students understand the importance of engaging in critical reflective practice when applying the researched-based strategies to their teaching, they were to learn how to document, analyze and reflect upon the ways their students develop knowledge and skills needed to become skilled, confident writers. Third, the program would bring focus to the university's promotion of literacy by providing direct community service to children identified as at-risk learners and to their parents who wanted to understand how they can provide ongoing literacy and learning support for their children at home.

## **Methods**

### **Participants and Setting**

The director of CBW is one of our university's teacher educators and the head of the initial licensure graduate program in Special Education-General Curriculum, K-12. Before becoming a teacher educator, she spent 30-years teaching in K-12 public schools. Because her special education teaching experience provided her opportunities to teach research-based interventions in reading and writing to students with deficits in literacy skills, and her doctoral training was in the effective uses of instructional and assistive technology, she was qualified to serve as both a mentor and trainer to the graduate interns serving as CBW instructors.

The Computer-based Writing program operated for three years (2012-2014) during the summer month of July. The CBW sessions were held Monday through Thursday, from 1-4 PM for four weeks in an iMac computer lab within the education school at the University. The interns, known as instructors, worked with

children ages 8 to 14 worked in small groups of two to four. They completed a summer reading course offered by the initial teacher licensure program for special education during the time they served as instructors. During the three summers, a total of eight instructors volunteered to work in the CBW programs to meet clinical teaching requirements the reading course. Seven of the instructors worked during the academic school year in public schools as paraprofessionals or provisionally licensed special education teachers. One instructor was a licensed elementary teacher completing the Reading Specialist program, taking the reading course for elective credit. With time spent pre-assessing students, providing writing interventions, and meeting with parents at the end of a CBW program, the instructors spent a total of 45 hours completing their clinical experiences.

The CBW director served as the lead instructor as well as handled administrative duties. Serving as both the lead instructor and director of the program was beneficial since she could model strategies with the young writers for the instructors to see. Also, because she worked alongside the instructors on a daily basis, it was easy to provide mentoring and guidance as needed.

To recruit CBW participants, administrators from the school districts worked with the CBW director to identify grades three through eight students who would benefit from involvement in the program. Because special education administrators or principals from several school districts sent letters to the parents of students they identified as having difficulties with writing, it is not known how many students were actually invited to apply. However, thirteen families of children ages 8-14 receiving special education services in their schools responded to the administrators' letters, and seventeen students in the same age range monitored by Child Study teams received interventions within their general education programs in their schools also responded. Four of those students were identified as English

Language Learners (ELLs).

When the thirty families responded to the invitation to apply, they sent the applications directly to the CBW director. All applicants were accepted, but before beginning the CBW program, an information meeting was held for the parents and their children to answer questions and tour the facility. To appropriately plan instruction, the instructors completed preliminary literacy assessments with the students to determine basic literacy skill levels. The following screening tests were: the word recognition Slosson Oral Reading Test (SORT-3), The Test of Written Spelling (TWS), running records (to determine fluency/reading comprehension) and students completed a handwritten writing sample. These types of assessments are ones typically administrated in educational settings.

While the instructors administered the screening assessments to the children, the director met with the parents to complete a multiple intelligence checklist to identify their children's preferences for learning (e.g., does your child like to draw? Does your child prefer talking to writing?). When parents were asked for their written consent to enroll their children in the program, it was explained that the university's Human Subjects Review Board had granted permission to the director to collect and analyze formative assessments, work samples, observations and program evaluation statements to determine the effectiveness of the CBW program. Although parents were given the opportunity to opt out of the study and have their children remain in the CBW program, all parents gave their permission to use study data for the purpose of sharing general information about the program and its benefits to the participants in educational conferences and/or scholarly publications.

## **Procedure**

The three main areas of instructional focus in CBW were developing keyboarding skills, addressing writing conventions such as spelling, syntax, mechanics and grammar, and helping the young writers acquire knowledge and application of the writing process.

**Keyboarding Skills.** Many ineffective writers demonstrate slow, illegible handwriting when writing with paper and pencil. Students with these kinds of persistent problems often benefit from the use of computer keyboarding because typing eliminates the hand-encoding process (Graham, 2006). When keyboarding, students do not have to worry about how to form letters, pay attention to spacing between the letters or words, or even stay within the margins of writing paper. However, typing requires a different set of mental and motor skills when composing with a keyboard since it involves learning physical positioning and movement, ergonomics (safe and comfortable keyboard interaction), and key location (Zeitz, 2008). Therefore, each three-hour CBW session began with thirty minutes of keyboarding instruction and practice.

Because Crews, North & Erthal (2006) stated that it is reasonable to expect elementary students to achieve 10-15 words per minute (WPM), all CBW students began keyboarding instruction with 10 WPM at 85% accuracy set as a goal to achieve. However, specific targets were adjusted with student input, based on the students' particular skill levels and cognitive abilities.

Type to Learn (TTL) by Sunburst was used as the keyboarding application because it teaches students to spell words, write sentences and apply proper punctuation and capitalization as they learn to type. Lessons and games are designed to improve specific keyboarding skills such as speed, accuracy, and hand

coordination. The TTL program noted student progress in progress reports shared with students so they could keep track of their accuracy in keyboarding, WPM and lessons completed. Instructors also reviewed progress data to determine if the program needed to be adjusted to meet students' needs such as setting specific WPM or accuracy rates for students to advance.

**Writing Groups.** At the conclusion of the thirty-minute keyboarding sessions, students met in writing groups with their instructors. Groups were formed based on age. Younger groups had eight to ten-year olds working together; the middle age groups had eleven and twelve-year olds working together, and the oldest groups had thirteen and fourteen-year old students working together. Most groups had three students, but in some cases, there were four students working with one instructor.

During the group meetings, students talked about their interests and decided on topics that they wanted to make the focus of their writing. In the first summer, CBW students wrote personal narratives. In summers two and three, students chose a variety of topics to research and write about such as how to play sports, athletic heroes, musical celebrities, pets, farm animals, creating and playing computer. These group sessions lasted about twenty minutes. Students talked about their ideas, asked one another questions about their topics, and set personal goals for each day such as what they might research to find additional or clarifying information.

**Strategy Instruction.** An important component of the reading course instructors completed during the CBW clinical experience was strategy instruction. In the reading course, instructors were given specific knowledge about how to effectively implement strategy instruction with struggling writers, but

implementing strategy instruction in the clinical experience took the interns beyond the theory and allowed them to actually implement strategy instruction with their CBW students.

The Self-Regulated Strategy Development (SRSD), a six-step writing strategies instructional model, was followed. This model encourages students to accomplish writing tasks through explicit instruction while integrating self-regulatory practices of goal setting, self-instruction, self-assessment, self-evaluation, and self-reinforcement (Graham, Harris & Mason, 2005; Reid, Lienemann, & Haganan, 2013). SRSD helped the instructors identify their students' writing deficits to choose writing strategies that could be used to address needed skills. Instructors focused on understanding their students' attitudes about the process of writing, how their students initially felt about themselves as writers (e.g. self-efficacy- the belief in one's ability), and gauge their students' motivation to become better writers (Harris et al. 2008, p. 4). Since SRSD is not a set linear-stepped approach, it can be reordered, combined, modified, and repeated, based on students' needs. Figure 1 describes the stages of SRSD.

For CBW instructors to determine what strategies to use to meet student needs, they documented, analyzed and reflected upon the effectiveness of the interventions they used. The following questions helped the instructors take field notes (anecdotal records) that were analyzed to determine the effectiveness of their instructional approaches:

- 1) What types of prewriting activities are effective when students generate ideas and thoughts for writing?
- 2) What strategies are effective for students to use when generating text to express a central idea, add supporting details, and write a conclusion?



- 3) What strategies are effective for students to use when revising the text to improve word choice, sentence variation, and show writer's voice?
- 4) What strategies are effective for students to use to edit their writing, in particular, addressing mechanics, grammar, and style?
- 5) In what ways do students choose to make their writing appealing, interactive and engaging to readers?

**Writing Conventions.** As noted in Figure 1, during SRSD stage 1, it is important to identify background knowledge and skills of the students to help them achieve writing goals. In addition to determining if students could express their thoughts in complete sentences and write cohesive paragraphs, CBW instructors noted how their students applied spelling, syntax, mechanics and grammar. Misspellings, incorrect grammar, run-on or incomplete sentences were the most common writing deficits that the instructors identified. When ineffective writers see such errors highlighted in red ink on their school composition assignments, they tend to develop self-doubt about themselves as writers, and express negative expectations about their abilities to learn to write effectively (Harris et al. 2008, p. 3 and 11). Therefore, it was important that attention focused on students' accomplishments to build self-efficacy.

**The Writing Process.** Goal setting is one important aspect of SRSD stage 2 (see Table 1). Struggling writers need to learn to set goals, monitor and manage their writing. The CBW instructors noticed that when their students wrote their initial screening drafts, they did not appear to spend time thinking about how to respond to a writing prompt or organize and revise their writing to address content and meaning. These observations reinforced the need for the CBW students to learn that writing is a recursive process. Students need to revisit each step of the writing

process to generate ideas, add, rearrange, remove, replace and revise before publishing. Through CBW, instructors experienced how their students struggled with rules and mechanics of writing. When focusing on purpose and goals, organization, and conveying their message to an intended audience, it appeared too much for some students to handle because writing requires extensive self-regulation and attention control.

**Table 1.** *The Stages of the SRSD Model*

<p>Before teaching any strategies to students, the instructors evaluated their students' skills (e.g., task-analyzed writing skills to determine if students were able to write and spell with reasonable fluency. Noted were basic writing conventions and sentence/paragraph structures such as opening sentences, supporting details, wrap-up or conclusion to the paragraphs.</p>	
<p>Stage 1: Develop and Activate Background Knowledge</p>	<p>Instructors talked with students about the importance of increasing knowledge about how to write successfully. The purpose of writing and what pre-skills may be needed to achieve a writing goal as well as what it means to develop self-regulation (the ability to monitor and control one's own behavior) were stressed.</p>
<p>Stage 2: Discuss the Strategy</p>	<p>Instructors talked with their students about the strategies that may work for them. Instructors collaborated with their students to identify and develop writing tools that were specifically made to help guide them through the writing process. (e.g., K-W-L chart, electronic web, or a self-designed graphic organizer).</p>
<p>Stage 3: Model the Strategy</p>	<p>Instructors talked aloud as they modeled the steps of a strategy, describing what should be done next, how to do each step, and when the strategy should be used.</p>
<p>Stage 4: Memorize the Strategy</p>	<p>Instructors taught students to repeat memorized steps and procedures of particular strategies. For example, when using the RAP strategy to locate information for their writing, students would say, "First I read a paragraph. Then I ask myself 'What is the main idea?' Next I put the idea into my own words."</p>
<p>Stage 5: Support the Strategy</p>	<p>Instructors practiced using the strategy with their students collaboratively in order to support the implementation of the strategy. When referring to strategy guides, instructors would ask, "What step is next?" The goal was to provide support and guidance as needed, but to also work toward</p>

	decreasing support in order to promote independence.
Stage 6: Independent Performance	Instructors kept field journals to note and reflect upon direct observations and examples of their students' abilities to independently apply the strategies they were being taught to use. During parent conferences, instructors encouraged the parents to ask their children how they were applying the strategies in different writing assignments in their classes at school, and become actively involved in supporting the use of strategies when their children complete homework.

Table 1 describes SRSD stage 3 as a time to analyze and discuss writing strategies. Instructors modeled the strategies designed to guide students through the writing process. They also encouraged their students to become collaborative partners and actively involved in deciding on adjustments to make or determining if a change in strategy was needed. Once ways were found to be effective, instructors transitioned to SRSD stage 4 as described in Figure 1 to help their students memorize strategy steps. In SRSD stage 5, prompts, guidance and reminders helped the young writers reach SRSD stage 6 when they demonstrated independence, using the strategies on their own.

Because CBW placed an emphasis on putting responsibility for the learning in the hands of the students, setting goals and teaching the young writers to identify their self-rewards, the instructors promoted student-centered learning and self-regulation.

### **Accomplishments**

Since the CBW clinical experience provided instructors opportunities to inquire systematically into, reflect upon, and improve their instructional practice, instructors made daily journal entries and engaged in critical reflective analyzes to determine the ways CBW participants met program and individual goals. When

the 4-week CBW clinical experiences ended, instructors noted that students demonstrated more awareness of their thought processes than when they first started the program. Students also appeared much more willing to learn new skills and strategies, and they became less reliant on their instructors for direct guidance as they progressed through the program. In other words, instructors stated that their CBW students appeared in control of their learning and exhibited more confidence in their writing abilities. Specific examples of self-directed learning are the following:

**Self-monitoring.** Students kept track of their progress by using their planning sheets (charts, webs, or graphic organizers) that they had created, referring to their notes, words or phrases to help them construct sentences in their writing.

**Self-instruction.** Students talked themselves through a task or activity. An example of this occurred when in response to an open-ended question an instructor asked a specific question about a character, a famous athlete, the student responded, “I don’t know the answer to that. But I can look it up!” Then the student proceeded to talk himself through the process of using a Web browser, choosing search words based on his topic, and then he read aloud information that he found, repeating key words and phrases as he wrote his sentences to add details to his writing.

**Goal setting.** Students showed signs of taking ownership of their work, identifying what they wanted to accomplish and how they would achieve it. An example of this happened when a student missed two days of CBW sessions due to illness. When he returned to CBW, he came 30 minutes early. When asked how he was feeling, he responded, “Oh, I am OK now. But I am so behind! I need to catch up!” Surprised by this response, the instructor asked him what he meant by that. He

replied, “I wanted to be on [Type to Learn] lesson eleven by now.” It was apparent that this student had established a particular progress goal for himself, and it was important to him to achieve it.

**Self-reinforcement.** When developing goals, it is important that students reward themselves when reaching or exceeding a criterion. The CBW instructors encouraged self-rewards in a variety of ways. Most students chose to mark off tasks listed on their planning sheets; others stated that they wanted extra time to spend illustrating their writings using a freeware paint program. In most cases they seemed to enjoy sharing their work with their CBW peers, obtaining feedback and getting “kudos” from their peers for their accomplishments.

To determine the effectiveness of processing writing interventions, the following questions guided instructors as they recorded observational notes and comments made by the CBW students:

**Question 1) What types of prewriting activities are effective when students generate ideas and thoughts for writing?**

Instructors spent time talking about how to collect and extend ideas for writing. Students were asked to explain what they learned from researching their topics, and when responding, they were encouraged to speak in complete sentences. In particular, “talk it out” strategy was important to employ with the English Language Learners. In some cases, if students demonstrated poor working memory, instructors wrote on index cards words or phrases the students uttered. The students used these cards to help them recall main ideas or facts to include in their writing.

Freewriting (quickly jotting down ideas, words or phrases) was also found to be

effective with quick thinkers who did not demonstrate constraints in handwriting.

But most students had trouble generating a topic of interest to them. The most effective brainstorming strategy used with these students was the Word Association Strategy. The director first modeled this strategy, and then instructors used it during small group sessions (See Table 2).

**Table 2.** *The Pre-writing Word Association Strategy*

Instructor Prompts	Student Responses
<p>Close your eyes, relax. Try to clear your mind of any thoughts....</p> <p>It is hard to think of nothing at all, isn't it? Anything pop into your mind? Type one word that comes to mind.</p>	<p>Summer</p>
<p>When you think of summer, what two words come to mind?</p>	<p>hot - beach</p>
<p>When you think of hot, what two words come to mind? When you think of beach, what two words come to mind?</p>	<p>sand air - water swim</p>
<p>When you think of sand and air, what one word comes to mind?</p> <p>When you think of water and swim, what one word comes to mind?</p>	<p>burning- cool</p>
<p>When you think of burning and cool, what one word comes to mind?</p>	<p>Fun</p>
<p>Let's take a look at what you wrote.</p> <p>The first word is summer, followed by hot beach. How can you use these words in an introductory sentence?</p> <p>How can you use the next words (sand, air, water swim, burning,</p>	<p>Summer</p> <p>Hot beach</p> <p>Sand air water swim</p>

<p>cool) in supporting detail sentences to talk about summer on a hot beach?</p> <p>How can you use the last word, fun, in a wrap-up sentence that ends the paragraph?</p>	<p>Burning cool</p> <p>Fun</p>
<p>We went to the beach last summer when it was really hot. The sand and the air were burning hot. We jumped into the water and went for a swim. Then we felt nice and cool. Going to the beach in summer was a lot of fun. I want to go again!</p>	

The CSPACE strategy (see Table 3) helped students generate story elements when writing personal narratives (Harris et al., 2008, p. 127-129). As a whole group activity, students spent time retelling their versions of the Three Little Pigs. The web development program, Kidspiration (see [www.inspiration.com](http://www.inspiration.com)), was used to create a visual image (Web) of characters, events, the conclusion and identify what the characters may have felt as the story unfolded. Instructors asked, “How do you want the reader to feel as they read your story?” To help their students think about their audience.

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**Table 3.** *A CSPACE Planning Guide*

Title		
Characters	Main character:	Other characters:
Setting	Place:	Time:
Problem And/or Purpose	Problem:	Purpose:

Actions	Beginning	Middle
Conclusion	Ending	
Emotions	How are the characters feeling?	
	What feelings do you want the audience to experience reading the story?	

Students used a K-W-L chart to track what they already knew about their topic, what they wanted to know when researching their topic, and then what they learned from researching their topic. K-W-L not only served as a prewriting strategy to tap into prior knowledge, but students also re-wrote the questions into statements.

Based on what the CBW students stated as topics of interests, instructors found Web sites that had appropriate content presented at their students' reading levels. To direct students to appropriate Internet sites, Portportal.com was used to create group sites that contained a subfolder of URLs dedicated to each student within the group. Based on observed need or requested help, instructors guided students to desired information about their topics using the Internet resources. However, students needed to learn how to take notes (not copying and pasting text from Web sites). Instructors reviewed the Collaborative Strategic Reading (CSR) approach module on IRIS Center (<http://iris.peabody.vanderbilt.edu/module/csr/>) to find strategies that would help their students identify the most important idea in a section of text that they were reading. The Getting the Gist strategy prompted students to identify the most important person, place, or thing in the reading section (usually a paragraph) and then re-state in as few words as possible the most



important idea of the reading section. Once students re-stated what they had learned, they were directed to write what they had just orally rehearsed. Another strategy, RAP, was used as a quick reminder to students to: Read (as you read, think about what the words mean); then Ask (what are the main ideas and details of the paragraph?), and Put (put the main idea and details in your own words).

**Question 2) What strategies are effective for students to use when generating text to express a central idea, add supporting details, and write a conclusion?**

Several other mnemonics were used to help students write and revise the text. For example, the POW-TREE strategy helped students organize their notes for writing (Harris et al., 2008, p. 160-161). The POW mnemonic guides students to P-pick an idea; O-organize notes such as creating the web or graphic organizer; and W- write more. If the student wanted to tell his audience what he believes about his topic, then the mnemonic TREE was followed:

T- Does the topic sentence introduce the main idea?

R- Are there reasons given that support the topic sentence?

E- Explain more about each reason to add supporting details.

E- Is there an ending statement that wrap-ups the paragraph or composition?

The peer collaborative process model was found quite effective in helping students generate ideas and identify needed details. When instructors met with their writing small groups to talk about their writing they first asked students to state what they liked about a peer's writing and then offer "I wonder" statements such as, "I wonder what you meant by..." This type of interaction helped students generate ideas for writing, supply missing details or re-write confusing statements to make their writing clearer and more interesting to others. When students identified what

they liked about their peers' compositions, students became aware of an audience.

**Question 3) What strategies are effective for students to use when revising the text to improve word choice, sentence variation, and show writer's voice?**

Instructors found the 6+1 Trait Writing approach to be most effective when helping students revise the text. The six traits listed on the writing guide were: Ideas (the meaning and development of the writing); Organization (beginning, middle and end); Voice (the way the writer expresses himself in writing); Word Choice (the words and phrases used to make the writing interesting); Sentence Fluency (the way the words and phrases flow within the text); and Writing Conventions (correctness of the writing). The rubric, Essay Rubric: 6+1 Writing Trait Model, from [ReadWriteThink.org](http://ReadWriteThink.org), helped students focus on writing trait criteria.

The seventh trait, Presentation, refers to the overall appearance of the writing. By using word processing, the students found reading their work on the monitor was much easier than reading their handwritten notes. Students also stated they enjoyed using the freeware paint program, TuxPaint, to create illustrations that added visual context to their ideas.<sup>3</sup>

**Question 4) What strategies are effective for students to use to edit their writing, in particular, addressing mechanics, grammar and style?**

Personalized editing checklists served as reminders to students to pay attention to writing conventions or writing tasks. For example, editing checklists contained reminders to use available writing resources such as the spelling and grammar tools in Microsoft Word. Older students expressed interest in knowing the readability level of their writing when the Readability Statistics window appeared after they

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<sup>3</sup> See <http://www.tuxpaint.org>.

ran a spelling and grammar check of their work.

Hearing their text read back to them was another effective way for students to note inconsistencies in their writing or areas that needed to be addressed such as grammar, punctuation, or misspellings. To take full advantage of the iMac's accessibility feature Text-to-Speech, instructors selected the students' preferred voice and speaking rate. When students highlighted their text and pressed the Option + Esc keys, the computer read the text. The ELL student preferred this Text-to-Speech feature because they needed Internet pages read to them when researching information.

**Question 5) In what ways do students choose to make their writing appealing, interactive and engaging to readers?**

The students who composed personal narratives used an online publishing program that is now called Lulu, Jr. to create paperback books containing their stories. Students copied and pasted their fully revised text from their Microsoft Word documents into the program's text fields, added images and their artwork<sup>4</sup>.

TuxPaint was also used to illustrate the expository text, but also, images saved as jpegs used with the application Softchalk created web-based content<sup>5</sup>. Students added YouTube movies; text annotations called text poppers to define words and phrases, and interactive activities such as quiz questions, crossword puzzles, drag and drop, labeling or matching activities to make their text interactive. For example, a student raising a steer for a 4-H project spent his time researching information about the origin and breeding practices of cattle. When sharing his work with his peers, the instructors noted how excited he was to see if they could

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<sup>4</sup> See [www.lulujr.com](http://www.lulujr.com).

<sup>5</sup> See [www.softchalk.com](http://www.softchalk.com)

label the parts of a steer. The instructors stated that when students added activities to their writing and then watched how their peers interacted with their text, it appeared to promote a sense of audience (See Figure 1).



In this picture you see an Angus bull that is black and polled. Its name is Bushwhacker from Eerrer Farms. It is four years old. Eerrer Farms breeds the cows. A normal Angus bull weighs 1,400 to 1,500 pounds. But this bull looks like about 1,425 pounds. Do you know the parts of a cow?

*Figure 1. Activity from The Angus Breed*

Finding images on the Internet, creating illustrations and incorporating interactive elements into their writing also helped the English Language Learners develop some skills such as oral expression and understanding English vocabulary. For example, one student wanted to learn more about the American Eagle and why it is the emblem of the United States. As she found an image from the Web, she asked, “What do you call this?” An instructor responded, “It is an American Eagle emblem.” A discussion followed, focused on the meaning of the word "emblem" and the fact that it stands for freedom. When asked to put what she learned in a sentence, the student orally stated then typed, “The bald eagle emblem means freedom.” She used the picture she found on the Internet and then typed a sentence about it in a photo album activity she created for her Softchalk interactive writing on Bald Eagles (See Figure 2).

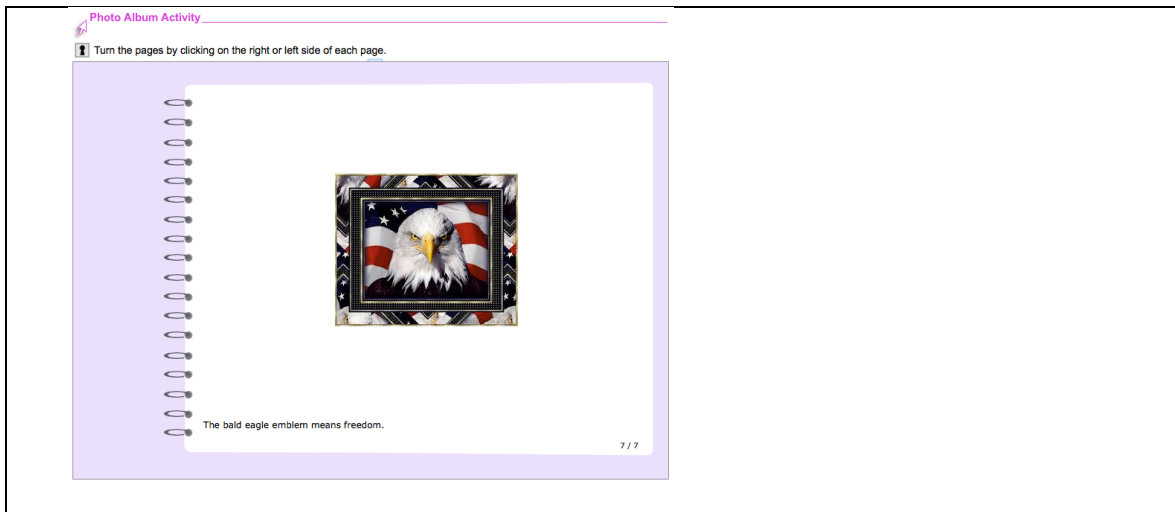


Figure 2. Activity from *The Bald Eagle, the National Bird of the U.S.A.*

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### Final Thoughts

When asked to evaluate their CBW experiences, the instructors stated they appreciated the CBW clinical experience that allowed them opportunities to try out literacy strategies they learned in their reading course. Based on field notes made by the CBW director, the analysis of the instructors' journals that documented observations and conversations held with CBW students, the director concluded that the instructors met the intended clinical experience goal that instructors acquire content and professional knowledge as they implemented best instructional, assessment and technology practices. For example, instructors stated that their anecdotal records were invaluable when creating progress reports that detailed strategies found to be effective for each CBW student. When instructors held conferences with the parents to review the reports and encourage parents to share the information with their children's teachers, they gained experience communicating with parents as they explained how the parents' ongoing support to use those strategies at home could help their children complete homework.

Upon review of instructors' journal comments and their final report reflections,

the director concluded that instructors demonstrated critical reflective thinking that informed their instruction. Also, the observed writing behaviors and work produced by the CBW participants followed the SRSD approach, showing a variety of effective reading and writing strategies that support the writing process.

Instructors noted that learning to type was also beneficial because once the students developed proficient keyboarding skills, they were free to think about composing rather than typing. Having their text in electronic format made it easy for students to add, delete, rearrange text, and use the spelling and grammar check tools as well as Text-to-Speech features to edit their work. Also, instructors reflected that their students learned to apply self-regulation skills as they set personal writing goals, followed reminders to use writing strategies, and then monitored their progress.

At the end of the program, an Open House was held so that CBW instructors and their students could demonstrate writing strategies and showcase completed work. Not only did extended family members come, but also community members attended. For example, a hearing specialist from the local school system wanted to see what one of her students had accomplished. This event not only brought focus to the university's promotion of literacy and direct community service to at-risk learners, but it also helped strengthen university-community collaborations with the local school systems.

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