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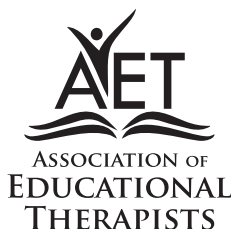
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## The Cloze Procedure in Educational Therapy: A Practical Informal Reading Assessment Measure

### Part One

Ann P. Kaganoff, PhD, BCET, FAET

*This article, Part One of two parts, provides information about how to create and use the cloze procedure for informal assessment. A brief history of the procedure is followed by guidance for creating cloze passages, administering the procedure, interpreting results, and using results to guide instruction and monitor progress. An Appendix contains sample cloze passages at three typical levels of difficulty to serve as models.*

#### INTRODUCTION

Educational therapists (ETs) depend upon an array of assessment measures that can indicate a client's level of functioning in the areas of academic performance, cognitive operations, and general learning. ETs frequently receive data on incoming clients derived from formal testing, such as the standardized scores that express the level of functioning relative to a standard such as a percentile score or a grade level. These standardized test scores often form the basis for establishing a client's eligibility for special services in the school system, or for making placement decisions. These measures, however, do not always provide an individualized picture of the client's strengths and needs as a learner.

In addition to formal test measures, there is another group of assessment measures that are useful in educational therapy. These measures are called performance-based, or informal measures, because they provide descriptive information that is gathered as the client performs a typical academic task such as reading or writing (School Redesign Network [SRN] at Stanford University, 2008). Descriptive information can be a direct window into how individuals use their specific strengths when responding to an academic or learning task. Performance-based measures can quickly identify the client's immediate needs and often serve as a direct link to appropriate instructional tasks and materials. Perhaps most important, the performance-based measure fits well within the model of individualized intensive intervention, where the contextual framework of the client is of supreme importance (Ficksman and Adelezzi, 2010, p. 17), and the primary focus is on tailoring the intervention to the individual strengths and needs of the client.

#### THE CLOZE PROCEDURE: A PERFORMANCE-BASED MEASURE

The cloze procedure (**Cloze**) is a useful tool for assessing several critical aspects of reading performance, including the ability to use contextual clues to construct meaning in an extended passage of text. **Cloze** is easy to create and to administer. This method can be used not only for evaluation but also subsequently for

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instruction making this a versatile and informative measure for students who have identified or suspected reading difficulties. **Cloze** is not intended to give a standardized grade level measure of reading achievement. Rather, it provides insight into a number of important reading-related skills and can be used as a complement to other informal measures of reading achievement, such as the Informal Reading Inventory (IRI) (Roe and Burns, 2010).

**Cloze** has a long history in both theoretical and applied aspects of reading research and reading instruction. The term cloze was coined in the first published paper on the cloze procedure (Taylor, 1953). Cloze passages, with their systematic deletion of words, were first used to assess the reading comprehension of military personnel, and have subsequently found wide use in standardized testing of reading comprehension. In fact, a high level of interest in a wide range of educational applications has continued to this day. **Cloze** passage construction, deletion patterns, scoring, test length, and reader responses are well researched (Robinson, 1972). Cloze passages are used to establish readability of text, to assess reading comprehension, and to research the essential elements that underlie reading comprehension, such as vocabulary, grammar, syntax, context clues, and prior knowledge (Raymond, 1988).

**Cloze** has stood the test of time, and indeed has gone beyond its earliest applications in readability measures and comprehension assessment to being adapted for college level and adult readers (Vaughn, 1995). Thus, this procedure should be seen as an appealing, or perhaps essential, tool for the ET, in light of its significant utility in both assessment and instruction. It combines ease of use with versatility. Cloze materials are easy and economical to create. It has high potential for instructional applications.

In **Cloze**, the reader is presented with a sentence or a passage from which words have been systematically deleted, usually every 5th word, and replaced with a blank of standard length. The reader then must make use of the meaning in the surrounding words and sentences to supply the missing words. **Cloze** thus taps the ability to supply missing or unknown words in sentences or paragraphs, based upon the meaning one expects to find, on background knowledge of the topic, on clues provided by the surrounding words or sentences and their grammatical constraints, on the reader's vocabulary, or on prior knowledge of the world. In the approach recommended in this article, the reader is not supplied with a list of candidate words from which to select, which allows for an unprompted picture of the reader characteristics noted above.

**Cloze** as used in educational therapy can reveal the extent of the student's awareness of how contextual clues function to supply and develop meaning, as well as an understanding of the interrelationships among words and ideas. For example, given a single deletion sentence, "Three black \_\_\_\_\_ were sitting in the tree," we would expect the reader to note that the word supplied must refer to something that is black and can sit in a tree,

and is more than one (there are, of course, several possibilities that make sense). As will be noted below, the administration of **Cloze** involves follow-up discussion with the student as to the reasoning behind the selection of the missing word.

**Cloze** can be used with longer passages of continuous text so that the reader must think about larger units of meaning. In this case, one would delete every fifth word and ask the reader to supply words which make sense both in the immediate sentence as well as in the passage as a whole. Again, the reader must be able to give reasons for his or her choices. **Cloze** is often used with older readers to assess how much background knowledge they are bringing to the passage or text they are reading. It can help the slow and plodding reader recognize how to more effectively use the logical grouping or clustering of words into meaningful units to increase reading speed and efficiency.

### CREATING A CLOZE PASSAGE

**Cloze** is easily devised and easily administered. The first step in the process is to select the passage or passages. In this writer's experience, it is often advisable to present the client initially with a non-fiction passage, such as from a science material, where the sentences are mainly declarative sentences and a lesser degree of inference is required. For the ET who sees students with a wide range of ages, it is usually enough to have cloze test passages at three levels of difficulty: easy (2nd to 3rd grade), moderate (4th to 6th grade) and challenging (7th to 9th grade). Passages can be selected from published school texts or from trade books whose readability can be informally estimated. Please note that **Cloze** as described here is often too challenging for students below 3rd grade, and the upper level passages can serve for both middle and high school readers. In determining which level to select for a new client coming in with limited data on reading skills, such as a percentile on a standardized test only, or a grade equivalent reading level only, the examiner would begin with a passage that appears to be at a comfortable or easy level, given the client's age and grade level. For struggling readers, passages that appear "easy" often are not.

*Educational therapists have the greatest success when partnering with parents who can provide oversight for these strategies in the home environment.*

A good cloze passage has two to three paragraphs of 5 to 8 sentences each. It is useful to have paragraphs that have a clear focus, with meaningful links or transitions between paragraphs. Once the passage is selected, sentences are typed up with every 5th word deleted and replaced by a 10 space underscore, with the exception of the first sentence, which is left intact. It is useful

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to make a copy of the prospective passage and experiment with several deletion patterns, to ensure that the deletions do not fall too frequently on proper nouns or dates or numbers that the reader is unlikely to know, or that are not referenced elsewhere in the passage. See Appendix for some short examples.

## ADMINISTERING CLOZE

As with all assessment measures there are specific steps to follow to make this a systematic measure and to make the ET's interpretation as reliable as possible. The examiner introduces the passage by saying, *"This is a passage (or article) that has some missing words. Your job is to see if you can figure out the missing words by looking at all the other words."* Some students will have played a game called Mad Libs (Stern and Price, 1958) and will recognize the format of deleted words, except here there are no clues given as to the part of speech of the missing word (which is a big part of the diagnostic utility of this measure, as the responses will indicate clearly the reader's awareness of grammatical constraints). There is, as noted earlier, also no "word box" of word choices.

The examiner should continue with the following instructions: *"The opening sentence has been left intact, with no deletions, to help you get started. You will insert only one word to a blank. If you cannot get the word right away, just keep going to look for more information that may help you. If the missing word is the first word in the sentence, you will have to read to the end of the whole sentence. In some blanks, there may be more than one word that fits. Just be sure the word makes sense with the rest of the sentences."*

For students with word recognition difficulties, or students who need help getting started, the examiner may read along with the student, with a pause at each blank, to see if the student can use listening comprehension to help with the task (remember, this is an informal measure). However, in order to most effectively assess the reader's ability to use contextual clues, the passage must be read silently, with the reader filling in the missing words as they are identified. The examiner may note that 'best guess' spelling should be employed (explain if necessary). When the student has finished, the examiner can read aloud the entire passage, including inserts that do not fit, to see if the student spots the discrepancies and wishes to make changes.

As the examiner and student read through the sentences, it is appropriate to begin a discussion, supplying words as needed where the student was unable to provide words that fit, and showing the student how to use the surrounding clues. It is also appropriate to point out specific clues that the reader probably used (especially when he or she may be unaware of the significance of the clues embedded in the specific wording). The student's response to this discussion forms the basis for subsequent instruction.

An important benefit of informal measures is that the examiner can go on to probe student responses, to gain additional information about the thought processes used, and about the student's level of awareness of the problem solving process. The examiner might ask, "What clues were you using to come up

with this word? What were you thinking in your mind when you wrote this word here?" This is particularly valuable data regarding potential language processing issues, to see whether students are aware of how they interpret text as they work their way through the cloze passage.

## INTERPRETING RESULTS

As noted above, the primary purpose of **Cloze** is to provide descriptive data about the individual client's strengths and needs in reading and thinking. Although there are a number of standardized reading achievement tests that use cloze passages to measure reading comprehension, such as the *Woodcock Johnson IV*, (Schrank, Mather and McGrew, 2014) the real power of **Cloze** is its diagnostic potential in several relevant areas of reading functioning. For example, the way a student approaches the task gives the ET good diagnostic data in several behavioral areas. Some students will be hesitant and unable to recognize or utilize the information in the surrounding text. Some will be impulsive and write words that fit only the first or last part of the sentence, but not the immediate text. Some readers, upon listening to the examiner read aloud, will make appropriate self-corrections. Some students are particularly intrigued with the "puzzle" aspect of the cloze passage, and may thus identify themselves as students who respond well to tasks that have a game-like nature. Some will give up half way through, while others may insist upon filling every last blank.

**Cloze** often indicates a need for further assessment of the student's language processing skills. It can indicate areas of difficulty the student might have in understanding complex sentence patterns and grammatical relationships. It shows how well the student can link information within paragraphs and across paragraphs. It shows how well the student notes the signal words that writers use to signal logical relationships such as sequences, cause/effect, or comparisons. It indicates which students have a need for direct instruction in context analysis and what to emphasize in instruction. Vocabulary deficits are often revealed, particularly for frequently occurring words that we often assume are known, but are not. If the examiner uses probes of student responses, their answers can indicate their level of metalinguistic awareness. Finally, it often gives valuable information about the student's ability to make inferences, a critical skill for effective reading.

## USING CLOZE RESULTS TO GUIDE INSTRUCTION

**Cloze** gives immediate information about the direction of instruction in reading. Since cloze is an accurate (though informal) indicator of context analysis skills, it can be presented to the student both indirectly and directly as a method of working on these skills. A cloze passage is a useful means of introducing the idea of context for those students who have not received direct instruction, and it addresses a skill that is often assumed by the classroom teacher but is not always directly taught. In all aspects of text analysis of both fiction and expository materials, it is extremely useful to develop the idea of context analysis as an important tool for skill development and reading improvement.

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Part Two in this series will include specific suggestions for instruction, including use of cloze to develop awareness of writers' signal words, specific phonics patterns, rhyming patterns, specific prefixes and suffixes, etc. **Cloze** is a particularly effective instructional tool for students who do not pay close attention to individual words and phrases, but make guesses about meaning based upon global clues such as repeated proper nouns. It is an effective means for improving inference and logical reasoning skills. Additionally, **Cloze** can be used to teach specific skills in word identification or vocabulary development. Sentences or passages can be constructed such that the deleted words might all contain a specific vowel sound, a particular consonant blend, or a prefix or root that is being introduced. In vocabulary development the target words to be supplied could be synonyms or antonyms of items being learned, or could all represent the same part of speech.

*Sentences or passages can be constructed such that the deleted words might all contain a specific vowel sound, a particular consonant blend, or a prefix or root that is being introduced.*

### USE OF CLOZE TO MONITOR PROGRESS

Because a student's responses to an initial **Cloze** can provide a baseline for monitoring progress, it should be a part of the ET's initial student evaluation. Over time, as students are given practice in creating their own cloze sentences, or solving more complex passages, dated work samples should be a part of the students' folders. As students explain how they provided or used context clues to select the missing word or words, their development can be noted in the progress notes. As they shift to the use of ready-made passages, students and teacher together can evaluate the level of skill and sophistication that has been attained through practice.

### CONCLUSION

**Cloze** used as both a diagnostic tool and an instructional tool provides an example of how valued techniques from reading instruction in times past can take on new meaning and new applications in the practice of educational therapy (see also Kaganoff on the Language Experience Approach, 2013). It is a measure that is easy and inexpensive to create, which provides a remarkable amount of diagnostic information about the reading-relevant areas of word recognition, context analysis, background knowledge, vocabulary development, inference and critical thinking. It provides a means of documenting growth over time. But perhaps most important of all, it is a task that seems

genuinely appealing to both young and older readers, especially to those who love a mystery.

### APPENDIX: SAMPLE CLOZE PASSAGES

#### THE ANIMAL DOCTOR (3RD GRADE LEVEL)

Who would you call for help if your cat cried and cried all morning or your puppy cut its paw?

A vet can help. A \_\_\_\_\_ is a doctor who \_\_\_\_\_ animals. Some vets work \_\_\_\_\_ farms. Some vets work \_\_\_\_\_ zoos. Dr. Fry is \_\_\_\_\_ vet. She works in \_\_\_\_\_ city. She helps sick \_\_\_\_\_.

Let's see what the \_\_\_\_\_ does in one day. \_\_\_\_\_, the doctor sees Sally's \_\_\_\_\_ Flip. Flip is hopping \_\_\_\_\_ his paw is sore. \_\_\_\_\_ vet puts something on \_\_\_\_\_ sore paw to make \_\_\_\_\_ better. Dr. Fry \_\_\_\_\_ to Sally about keeping \_\_\_\_\_ sore paw clean. If \_\_\_\_\_ paw is clean, it \_\_\_\_\_ get better fast.

#### THE BERMUDA TRIANGLE (4TH – 6TH GRADE LEVEL)

Thirty-three years ago on a December afternoon, five Navy planes took off from their base in southern Florida. They \_\_\_\_\_ never seen again. Flight 19 \_\_\_\_\_ its 14 crew members \_\_\_\_\_ without a trace. They \_\_\_\_\_ over a part of \_\_\_\_\_ Atlantic Ocean that is \_\_\_\_\_ called the Bermuda Triangle.

\_\_\_\_\_ people say one point \_\_\_\_\_ the triangle touches the \_\_\_\_\_ coast of Florida and \_\_\_\_\_ remaining two points touch \_\_\_\_\_ islands of Bermuda and \_\_\_\_\_ Rico. Others say the \_\_\_\_\_ is much bigger. Whatever \_\_\_\_\_ size, the Bermuda Triangle \_\_\_\_\_ become famous as a \_\_\_\_\_ of mystery. Story after \_\_\_\_\_ tells of ships and \_\_\_\_\_ vanishing there. Movies, books, \_\_\_\_\_, and magazines keep the \_\_\_\_\_ alive.

#### A POPULAR SPORT (MIDDLE AND HIGH SCHOOL LEVEL)

Do you know what the most popular sport in the world is? If you guessed basketball, \_\_\_\_\_, hockey, or baseball, you're \_\_\_\_\_. The sport that is \_\_\_\_\_ and watched by more \_\_\_\_\_ than any other is \_\_\_\_\_. In 1974, and again \_\_\_\_\_ 1978, more than a \_\_\_\_\_ people tuned in to \_\_\_\_\_ the world championship game \_\_\_\_\_ television.

Some experts believe \_\_\_\_\_ may well be the \_\_\_\_\_ sport in the world. \_\_\_\_\_ think the ancient Chinese \_\_\_\_\_ a game very much \_\_\_\_\_ soccer more than two \_\_\_\_\_ years ago.

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About the \_\_\_\_\_ time, soldiers from Rome \_\_\_\_\_ the sport to England. \_\_\_\_\_ game changed into its \_\_\_\_\_ form there. Then it \_\_\_\_\_ around the world. Today, \_\_\_\_\_ in more than 140 \_\_\_\_\_ play soccer.

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## Outside the Box

Susan Taber, MEd, BCET

*When you were a kid, did you like doing homework? Was there ever a time you didn't want to do it or didn't know how to begin? We all know students who seem unable to work independently on these tasks. As educational therapists, we recognize the interplay that homework presents for our students with learning, attentional, socio-emotional, and/or psychological issues.*

## DEMYSTIFYING THE NEED FOR HOMEWORK

Helping our students understand the purpose of homework is often a good start. Why do their teachers give them more to do after the obligatory school day ends? This question often goes unanswered for many students. They tell themselves it's just something they *have* to do. When feeling overwhelmed with the process, not knowing how to start, or seeing that there's way too much on their plates, students haven't the time to consider "why". In fact, working independently or without sufficient support may also prevent them from considering "how".

When educational therapists (ETs) share with students how their brains learn and include information from the University of Waterloo, Ontario, Canada, on *The Curve of Forgetting* (1995), it drives home the reality that any student can forget 50% - 80% of the material taught in a single class if not reviewed within the first 24 hours. Or refer to Gary Wolf's article in *Wired Magazine* (May 2005) entitled *Want to Remember Everything You'll Ever Learn? Surrender to This Algorithm*.

Researcher Dr. Harris Cooper from Duke University (Cooper, 2006), has conducted a great deal of research around the question of homework and describes some of today's popular anti-homework arguments, such as homework has a negative impact on children and their families causing undue stress in the household. According to Dr. Cooper, anti-homework advocates claim that family routines and plans can be significantly disrupted by the burdens of homework leaving little time for quality family bonding. All of this can result in negative student attitudes toward school and learning which can lead to procrastination that causes stress in the family which leads to tear-filled evenings which leads to... Well, you get the picture. It becomes a vicious cycle. However, since homework is likely here to stay in one form or another, what can be done to decrease student stress and increase student confidence?

## FUNCTIONS OF HOMEWORK

After giving this topic much thought over many years, here are what seem, to me, to be the three most useful functions of homework:

### 1. Students benefit from the follow-through:

- What students learned in class that day can be reinforced with additional material once they are at home. Some homework assignments can be useful as part of future test preparation.
- In a quieter setting, students may be able to better process the information at their own pace.

### 2. Homework can help students learn and retain new information:

- Sometimes the relief of just getting it done eliminates this consideration for students. But a review of their completed work before whisking it away can help students retain and retrieve needed information at a later date.