

Instructional Cloze *Redux*: Tactical Support for Comprehension Strategy Instruction

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The conceptual roots of the text deletion practice known as cloze are derived from Gestalt psychology, which highlights the achievement of closure as basic to in human cognition. Taylor (1954), who is typically credited with its development, regarded word deletion tests as “an objective measure of language correspondence between reader and writer” (Taylor, as cited by Berrent, 1988, p. 384). This definition implies that text comprehension involves a kind of meeting of minds between author and the reader. Comprehension fails when a tipping point of mismatch between reader and text is reached; i.e., the reader is not sufficiently synchronized with the conceptual and linguistic foundations of the passage. It is because of this reader/text resonance that one should be able to address questions related to text difficulty through the use of cloze.

In addition to the use of cloze as an assessment strategy (Lapp, Fisher & Wolsey, 2009; Mariotti & Homan 2005; Schumm, 2006), its application as a teaching tool has been explored in the literature. For example, Jacobson (1990) described cloze as “remarkable for its simplicity, versatility, and power” (p. 244), and Blachowicz and Ogle (2008) refer to instructional cloze as a “particularly useful strategy in individualized instruction” (p. 211). Barnitz (1988) affirms the important role of cloze in supporting comprehension instruction: “the cloze procedure has long been established as a means of facilitating . . . comprehension” (p. 609); for Girgin (2007) cloze is a powerful means of fostering critical reading. Based on a comprehensive survey of instructional cloze, Rye (1982) concluded that cloze activities could support comprehension across curricular areas.

Cloze is often included in discussions of reading comprehension strategies, however, this article is premised on the assumption that it is more productive to think of cloze as a *tactic* that may be applied in the teaching of strategies. In other words, cloze as an instructional approach is better understood *operationally* in support of the broader schemes of strategies: “[cloze is] only one activity among many that teachers may want to introduce as part of a reading development program” (Rye, 19821, p. 47). In other words, while tactics and strategies both imply purposeful and disciplined actions, tactics are the procedures one applies in the service of the strategy. Figure 1 presents some key conceptual distinctions between strategies and tactics.

<Figure 1>

Why Cloze?

Comprehension Processes

As cloze requires a conscious activation of a complex network of cognitive and linguistic processes, completing cloze activities puts the student squarely in the driver’s seat of meaning making. It is difficult to conceive of anyone engaging in cloze without a high degree of active cognitive engagement, a factor considered by Blachowicz and Ogle (2008) as the *sine qua non* of reading comprehension. According to these authors, reading comprehension is defined as the process of “*actively* connecting ideas while reading and *monitoring* the meaning-making process [and]. . .connect[ing] ideas across sentences and paragraphs” (p. 12) [Emphasis added]. Other theorists have also emphasized the importance of reader engagement. For example, Smith (2004) regards the reading process as an active form of reduction of uncertainty, while Riley’s (1986) discussion of instructional cloze emphasizes the importance of interactive mental processes.

Blachowicz and Ogle's (2008) definition of reading comprehension stresses the importance of forging meaningful linkages across the various units of text. In completing cloze activities, the student must be able to navigate back and forth between the local levels of sentence or phrase and the wholeness of the text (Dewitz, Carr, and Patberg, 1987). For example, a student may sense that a particular deletion is a noun, yet the clue for the identity of the noun may lie in the preceding paragraph. Carr, Dewitz, & Patberg (1989) refer to such inter-sentential thinking as "drawing plausible inferences" (p. 381). Giordano (1985) suggests that the conventional instructional approach of telling students where to look in the text to draw inferences is not as effective as having them engage in cloze activities which prompt students to search for key information: "Instead of listening to appeals from instructors about key information, the student must focus on key information to complete [the cloze activities]" (Giordano, 1985, p.318). This is not to suggest that merely giving cloze activities is the ultimate solution for weak inferential thinking, rather that cloze activities may play a catalytic or tactical role in stimulating the required cognitive processes.

Perhaps the most compelling argument for the use of cloze activities in fostering reading comprehension lies in their potential to stimulate metacognitive awareness; i.e., the capacity to reflect upon one's own thinking processes or to 'think about thinking' (Burley, Brown, & Saunders et al, 1985; Dewitz, Carr & Patberg, 1987). The effectiveness of cloze in strengthening metacognition is most easily observed in the arguments and counterarguments among students as they deliberate on their choices for the deleted words. Metacognition necessarily involves the creation of a degree of distance between reader and text in order to *think about* the text; i.e., making explicit tacit textual knowledge. At certain levels of cognitive maturity, such deliberation can evolve to the students' putting themselves in the author's frame of mind and

discovering the writing strategies that were employed in the creation of the text. This awareness holds the potential of forging pedagogically important linkages between reading and written expression (Anderson & Rubano, 1991).

Assessment and Instruction

My experience as a consulting clinician has led me to believe that the use of instructional cloze activities is often circumscribed by a teacher's experiences with cloze as an assessment tool. The reliability of cloze for assessment involves formulaic applications, such as the deletion of every nth word and counting only exact substitutions. (Lapp, Fisher, & Wolsey, 2009; Mariotti & Homan, 2005; Schumm, 2006). The opposite is true with instructional cloze; its power lies in its ability to target student needs through *selective deletion* for "valid instructional purposes" (Valmont, 1983 p.173). Somewhat paradoxically, use of cloze for assessment requires a rule-governed stance, while instructional cloze calls for a high degree of flexibility. Figure 2 presents some of the important distinctions between instructional cloze and cloze used for assessment purposes.

<Figure 2>

Implementing the Cloze Tactic

What follows is a discussion of some key aspects of the use of cloze as an instructional tactic. In applying these guidelines, it is important to maintain a clear distinction between ends and means i.e., strategies and tactics. Cloze activities, in and of themselves, do not teach; they are among many tactics that may be used in the pursuit of the goals of comprehension strategy instruction. This exploration is based upon some of the limitations and misuses of instructional cloze, as identified by authors such as Jongasma (1980), Rye (1982), and Mowey and Conahan

(1995). They include: (a) over-use, (b) implementation without relationship to goals; i.e., using cloze as a tactic without a broader strategic context; (c) lack of calibration of task difficulty, and (d) confusing practice activities with teaching. Because one or more of these factors that commonly cited as contributing to weak research support for the effectiveness of instructional cloze, it is of critical importance that they be considered in any instructional application of instructional cloze.

Incorporating Appropriate Adaptations to Accommodate Students' Learning Needs

The appeal of cloze is grounded in its puzzle-like qualities (Johns, 1991). The popularity of diversions such as crossword puzzles and word jumbles attests to the wide appeal of word-based challenges. While solving such puzzles can be very satisfying, attempting puzzles beyond the range of one's competency engenders equivalent levels of frustration. One can only speculate as to the degree to which student frustration with tasks involving cloze has led to teachers' abandoning the procedure. It follows that careful attention to difficulty level, described by Rye (1982) as "deletions [that are] demanding, but not too difficult or frustration" (p.70), is important to the success of cloze in reading instruction. Anyone who has struggled with crossword puzzles that are simply too difficult can understand the deleterious effects of giving students cloze activities that are at their frustration level. In other words, negative perceptions of cloze as an instructional technique may be more properly understood as issues related to its implementation rather than weaknesses with the tactic itself.

When students fail to respond to cloze activities, modifications and adaptations may be applied which allow the task to become accessible opportunities for learning. Completing a task analysis of a cloze activity in relation to students' needs is an essential first step towards

increased responsiveness to diversity. Rather than frustrating certain students by giving the same cloze activity to all, it is far more effective to use specifically adapted versions of the cloze task, thereby providing the scaffolding needed for learning to take place. Cloze activities given to a group of students without consideration of their specific learning needs can become exercises in testing or at best reinforcement—rather than learning. Such confusion of *testing* with *teaching* contributes to what Stanovich (1986) refers to as the *Matthew Effects* in which those who are already doing well continue to progress while the gap between them and the lower achieving students widens.

Writing in general terms, Rye (1982) suggests some practical guidelines for creating cloze activities that meet the needs of a range of students, noting that content words (nouns, main verbs, adverbs, and adjectives) present a greater challenge than other parts of speech and that there exists an “inverse relationship . . . between the difficulty of prediction and frequency of [a word’s] occurrence” (p. 62). Figure 3 presents some other means of adapting cloze in response to student needs, based upon the work of Auls (1978), Rankin (1977), Rye (1982), and Nessel & Graham (1982). The lists of both the adaptations and needs are presented by way of example only. Ultimately, the success of an instructional cloze is contingent upon knowing what a student needs and responding to those needs with an open and flexible mindset; therefore, the teacher should not feel constrained by these guidelines.

<Figure 3>

In addition to the adaptations discussed above, it is also important to consider the overall difficulty levels of the texts being used for instruction, often referred to as the instructional level or zone of proximal development (Jongsma, 1980; Ridgeway, 1995; Rye, 1982). Being attuned

to text difficulty level is particularly important in the early years and remains a significant consideration for students experiencing decoding difficulties in the middle years. Working with texts that are simply too difficult yields little or no benefit, often serving only to compound the student's general frustration with literacy.

Adjusting Instructional Cloze According to Students' Developmental Levels

Early years. The nature of instructional cloze activities will, of necessity, vary with students' overall literacy development. It is now generally accepted that the emerging reader in draws upon and integrates three broad categories of information: semantic, syntactic, and visual as they navigate through texts (Stokes, 1999). The effective teacher of early reading manages instruction in such a way that children engage these cueing systems in a strategic and balanced manner. Through the careful selection of texts, effective book introductions, and strategic prompts and cues, the fledgling reader becomes progressively more autonomous, a process that Marie Clay (1994) refers to as establishing a self-extending system. Strategic use of instructional cloze at these early levels can support students' growth in their capacity to draw on the three cueing systems, thus strengthening their abilities to navigate familiar as well as unfamiliar texts.

By modeling early reading processes through cloze, the teacher can support emerging capacities to utilize cues in a balanced and deliberate manner. Small group settings provide ideal opportunities for using cloze-based *think alouds* to demonstrate the important thinking and problem-solving skills that underlie the delicate balancing act of early reading. The teacher who is a good observer of students' engagement with texts will be able to create the kinds of text deletions that students need in order for learning to move forward. For example, students who

are over-relying on semantic and syntactic cues will benefit from cloze activities that emphasize the use visual cues, perhaps through showing initial and/or final letters in the deletion blanks.

Middle years and beyond. As students progress to reading more complex texts, instructional cloze activities may be developed which support the various comprehensions strategies that feature prominently in middle years curricula. At this level, cloze becomes a tactic for developing greater sensitivity to inter-sentence connections, and the targeted textual unit shifts towards paragraphs or longer sections of text. In contrast to emerging literacy activities, which focus on the sentence and the cueing systems within that sentence, the middle years student needs to be guided in the discovery of textual structures. To that end, the teacher can design activities based on word, phrase, and even sentence deletions. Consequently, the student is able to more effectively “think like the author” (Anderson & Rubano, 1991), thereby strengthening reading comprehension as well as creating springboards for composing.

Figure 4 summarizes some of the major differences between the applications of instructional cloze at the Early and Middle Years levels. The descriptors are best understood as ends of a continuum, rather than as discrete points; in other words, the teacher should not feel constrained by this chart. It is presented merely as a catalyst for creative and responsive planning.

<Figure 4>

Strengthening Metacognitive Awareness through Incorporation of Student Discussion and Reflection

Because of its potential to stimulate and engage students in metacognitive work, cloze can provide an effective platform not only to model important cognitive processes, but to engage students in these processes. In completing a think-aloud, the teacher demonstrates to students the problem solving that is stimulated by cloze. Such instruction stimulates students' discussing their own thinking as they move along the path to independent application.

Particularly in the middle years and beyond, cloze is an effective vehicle for focused group discussions. Because reading comprehension occurs at the interface of background knowledge and text, cloze activities in small groups are likely to generate much lively discussion. Students become actively engaged learners as they draw on what they bring to the text as well as their sense of the wholeness of the passage. When such activities are introduced, it is very important to remind students that the purpose of the activity is *not* to replicate the words in the original text, but to generate and support choices that hold meaning *for a particular student*: "Requiring students to come up with exact replacements may be analogous to requiring one right answer to comprehension questions" (Jongsma, 1980, p.19). Much of the power of instructional cloze derives from its deliberately ambiguous quality.

Studies by Houston (1976), Vivion (1985), and Meyer & Tetrault (1986) confirm a strong correlation between student interaction and the effectiveness of instructional cloze. Because of its potential to stimulate and engage students in metacognitive work, cloze can provide an effective platform not only for the application of comprehension strategies, but also for engaging students in articulating the reasons for their choices (Barnitz, 1988; Rye, 1982). Such reflection

is not limited to small group work, in some contexts; self-reflection may serve a similar purpose. For example, Gibson (1997) developed a successful annotated cloze procedure in which students were asked to express the reasons for their choices through writing or underlining.

Ensuring that Cloze Remains Situated within the Context of Strategy Instruction

For instruction to be effective, the teacher must work through a series of stages during which students come to understand not only the *what*, but also the *why*, *how*, and *when* of what they are learning. In their study of the implementation of a cloze-based instructional strategy, Carr, Dewitz & Patberg (1989) utilized the following phases in their work with students: (a) explain the process (b) model the thinking (c) practice going from simple to more complex (d) supervised group work and (e) individual work. Mowey and Conahan (1995) suggest a similar sequence, but include the students' creation of their own cloze passages.

Because of its very format—a workbook type of activity—the teacher may be tempted to regard the tactic of instructional cloze as only appropriate for independent work. At worst, cloze may be used as a kind of filler or busy work. As has been emphasized throughout this article, the effectiveness of cloze as a tactic for comprehension strategy work depends upon the teacher's sense of purpose and sensitivity to student needs. Cloze activities do not teach, reflective practitioners of the art of teaching do.

An Example of the Application of Cloze as an Instructional Tactic

Development of tactical cloze activities requires a degree of metacognitive awareness on the part of the teacher. By noting personal thinking processes, the teacher analyzes a text in relation to the goals of the comprehension strategy as well as the cognitive processes underlying that strategy. It is this knowledge that forms the basis of tactical cloze activities; one must not put

the proverbial cart before the horse by designing cloze activities without a deep knowledge of the text.

According to Carr, Dewitz and Patberg (1989), instructional cloze is “conceptually similar” to the *Question-Answer Relationships (QAR)* strategy, developed by Raphael (1986). *QAR* has as its goal the strengthening of comprehension by learning how to perceive differences in types of questions. According to the *QAR model*, there exist two broad categories of questions: text-based and head-based. Furthermore, there are two main kinds of text-based questions: *right there*, and *think and search*. Head-based questions are also of two types: *author and me* and *on my own*. As students grow in their understanding of the nature of questions, they become more adept at answering questions, and ultimately, asking questions.

What follows are samples of cloze activities in support of the *QAR* strategy. Use of these passages is based on the assumption that students would have participated in related instructional activities. It is important to remember that these cloze pages are tactical in nature, designed to support the goals of *QAR*. All are based on the following text:

Some people think that the emu is funny looking and awkward. It is the largest Australian bird that is sometimes confused with its relative, the ostrich. Emus have long, droopy, grey-brown feathers that give them a shaggy look. Their wings are too small to be of any use for flying. Using their three toes, they are able to run fast, at times up to thirty miles per hour. Emus' heads are covered with short feathers, sometimes called down. Their bright eyes and pointy beak often give this bird a look of intelligence.

Emus like to be by themselves, but sometimes they form groups and travel great distances looking for the plants and insects they like to eat. Because emus roam all over Australia, they are called nomadic. You are not likely to see emus in cities and they do not like rainforests.

You may be surprised to learn that the male emu is much busier than the female in raising young emus. The mother emu's only job is to lay five to twenty eggs in the nest. The father emu then sits on the nest for eight weeks waiting for the eggs to hatch. The father does not have to leave the nest to look for food because he can live on the fat in his body. After the birds are hatched, the father looks after them for almost another year.

Right There

In order to answer a *right there* type of question, the reader must locate the response within a sentence from the text. In some instances, part of the answer is embedded in the question. For a cloze activity to be a catalyst for the cognitive operations required for this kind of question, deletions should require the student to focus on a particular sentence and *not look beyond the sentence for clues*. Presenting the sentences to the student as discrete units may help to emphasize the circumscribed nature of *right there* thinking.

1. *Their _____ are too small to be of any use for flying.*
2. *They are able to run _____, at times up to thirty miles per hour.*
3. *Emus' heads are covered with short _____, sometimes called down.*
4. *Emus like to be by themselves, but sometimes they form groups and _____ great distances looking for the plants and insects they like to _____.*
5. *You may be surprised to learn that the male emu is much busier than the _____ in raising young emus.*
6. *The mother emu's only job is to _____ five to twenty eggs in the nest.*
7. *The father emu then _____ on the nest for eight weeks waiting for the eggs to hatch.*
8. *The father does not have to _____ the nest to look for food because he can live on the fat in his body.*
9. *After the little _____ are hatched, the father looks after them for almost another year.*

Think and Search

As is the case for *Right There* questions, the answer to a *Think and Search* question can be found in the text; however, it is not possible to identify a specific *location* for the answer. The reader must apply analytic and synthetic thinking in order to derive an answer. Cloze passages designed to support such thinking are based on deletions that require the student to go beyond the context of the sentence while remaining grounded in the words of the text. In comparison to the *right there* cloze activities, fewer deletions are possible for *think and search* exercises.

Emus like to be by themselves, but sometimes they form groups and travel great distances looking for the plants and insects they like to eat. Because emus _____ all over Australia, they are called nomadic. You are not likely to see emus in cities and they do not like rainforests.

You may be surprised to learn that the male emu is much _____ than the female in raising young emus.

The mother emu's only job is to lay five to twenty eggs in the nest. The _____ emu then sits on the nest for eight weeks waiting for the eggs to hatch. The father does not have to leave the nest to look for food because he can live on the fat in his body. After the birds are hatched, the father looks after them for almost another year.

Author and me

In answering an *Author and you* type of question, the reader's background knowledge is activated and synthesized with text-based information. The differences between this type of question and the *Think and Search* are subtle and the teacher is cautioned not to become bogged down in determining which is which. In fact, engaging students in discussion as to which information sources they used to respond to

the questions can be quite profitable; in other words, students' thinking about their thinking is in most cases more significant than the response itself.

Some people think that the emu is _____-looking and awkward. It is the largest Australian bird that is sometimes confused with its relative, the ostrich. Emus have long, droopy, grey-brown feathers that give them a _____ look. Their wings are too small to be of any use for flying. Using their three toes, they are able to run fast, at times up to thirty miles per hour. Emus' heads are covered with short feathers, sometimes called down. Their bright eyes and pointy beak often give this bird a look of intelligence.

On my Own

On my own questions can be answered without any direct reference to the text. Because this kind of thinking is not text-based, developing relevant cloze exercises is more challenging. The first step is to examine the text for language that expresses the personal opinion of the author. Somewhat in contrast to the *Author and You* questions, the students should be encouraged to generate their own personal responses, regardless of their perception of the author's point of view.

Some people think that the emu is _____-looking and _____. It is the largest Australian bird that is sometimes confused with its relative, the ostrich. Emus have long, droopy, grey-brown feathers that give them a shaggy look. Their wings are too small to be of any use for flying. Using their three toes, they are able to run fast, at times up to thirty miles per hour. Emus' heads are covered with short feathers, sometimes called down. Their bright eyes and pointy beak often give this bird a look of intelligence

You may be _____ to learn that the male emu is much busier than the female in raising young emus. The mother emu's only job is to lay five to twenty eggs in the nest. The father emu then sits on the nest for eight weeks waiting for the eggs to hatch. The father does not have to leave the nest to look for food because he can live on the fat in his body. After the birds are hatched, the father looks after them for almost another year.

It is hoped that the preceding example will encourage further applications of cloze as *one tactic* in the teacher's repertoire of tools for implementing other comprehension strategies. Of course, not all comprehension strategies are suitable for cloze work, nor are all aspects of a specific strategy amenable to such applications. Instructional cloze is but one of many possibilities—effectiveness of which ultimately depends upon the teacher's willingness to experiment and gauge student response.

Summary

In many cases a teacher's experiences with cloze has been limited to assessment and/or to assigning cloze-type workbook pages. The main purpose of this article has been to broaden the framework for the use of cloze activities as a tactic in literacy instruction. It is an invitation to consider cloze as one of many viable tactics in the vast and varied landscape of literacy instruction. As is the case with all tactics, instructional cloze can be effective when applied within a comprehensive literacy framework. Such understanding, combined with sensitivity to the range of student needs is foundational to the creation of strong literacy programs. Without this context, instructional cloze easily takes on the quality of yet another gimmick, rather than the powerful teaching tool it can become in the hands of knowledgeable teacher.

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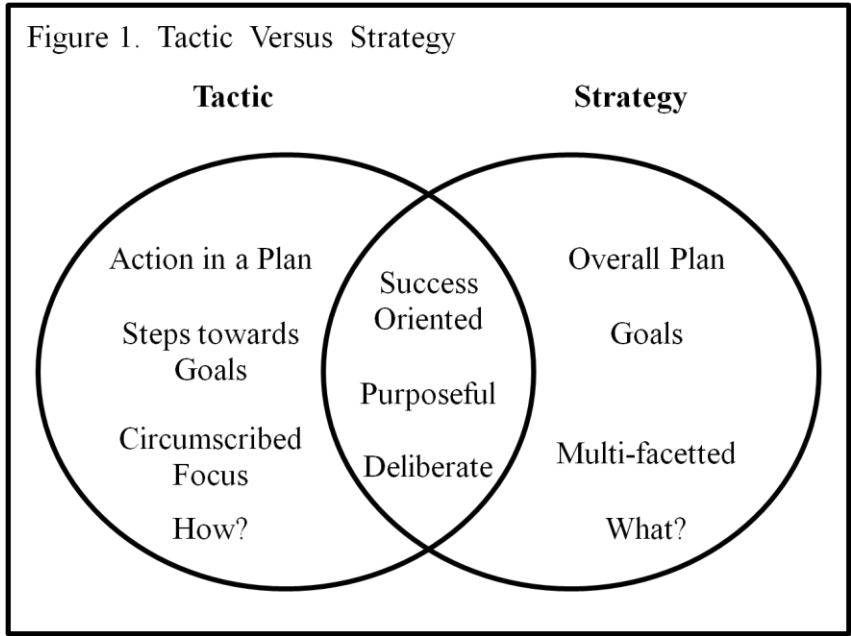


Figure 2. Features of Instructional Cloze as Contrasted to Cloze Used for Assessment Purposes

	<u>Cloze for Assessment</u>	<u>Instructional Cloze</u>
<i>Orientation</i>	Convergent	Divergent
	Deterministic	Probabilistic
<i>Teacher Mindset</i>	Rigidity	Flexibility
<i>Deletions</i>	Every <i>n</i> th word	Deletions vary according to instructional goals and student needs
<i>Student responses</i>	Marked as correct/incorrect	Responses evaluated according to the student's cognitive frame of reference
<i>Purpose</i>	Determination of instructional level of text for instruction	Strengthening reading comprehension

Figure 3. Varieties of Selective Deletions in Relation to Specific Learning Issues

<u>Modification/Adaptation</u>	<u>Learning Issues</u>
Reduction in the number of blanks	Stamina, concentration span, problem-solving difficulties
Leaving first and/or last letters in the blank	Language based learning issues
Multiple Choice cloze	Weak expressive language, weak spelling
Reduction in length of passage	Concentration span
Providing a bank of words	Limited background knowledge, language issues
Deletions at the end of sentences only	Language issues, working memory limitations, attention control difficulties

Figure 4. Instructional Cloze in Relation to Developmental Literacy Learning Outcomes

	<u>Early Years</u>	<u>Middle Years and Beyond</u>
<i>Textual Unit</i>	Sentence	Paragraph/text sections
<i>Deletion Type</i>	Partial words, whole words	Words, phrases, sentences
<i>Teaching Methodology</i>	Think alouds by teacher	Small group interaction/individual work
<i>Goal</i>	Integration of meaning, syntactic, and visual cues	Comprehension/discovery of author's strategies