



Transactional Idiom Analysis: Theory and Practice

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Abstract

The socio-psycholinguistic nature of language has long been a topic of intense scholarly discussions. This article begins with a review of the reading models that have been posited in the professional literature since the early decades of the last century, some of which continue to influence research to this day. This review is followed by a discussion of K. Goodman's transactional socio-psycholinguistic reading model: this model is then extended to include *Vivid Phrasal* (VP) idioms by offering an account of how second language (L2) readers transact meaning in context. The extension of Goodman's theoretical framework into the realm of L2 reading is referred to as *Transactional Idiom Analysis* (TIA) which involves the examination of how well L2 readers strategize and transact meaning when confronted with VP idioms in a variety of reading tasks. After justifying this new theoretical model for comprehending and interpreting VP idioms, the article concludes with a discussion of the potential theoretical and practical implications of TIA. Empirical evidence in support of TIA is provided.

Introduction

In recent years, a large body of research literature has refocused our attention on the reading process. The ways in which learning to read and reading in first (L1) and second (L2) languages are the same or different have long been a topic of intense debate. Undoubtedly, such issues will continue to have an impact on learning to read and teaching in L2 in the years ahead. One author whose work over the last three decades has significantly impacted the socio-psycholinguistic nature of language and the science of reading and reading development is Kenneth Goodman. This article extends K. Goodman's transactional socio-psycholinguistic view of reading to include the "meaning-making" process of *vivid phrasal* (VP) idioms; that is, it offers a critical account of how readers transact meaning in context when reading, using VP idioms as a test case.

The sections that follow offer a critical account of K. Goodman's hypotheses. They open with a historical perspective on reading and the reading models that have been posited in the professional

literature since the early decades of the last century. This is done in order to situate K. Goodman's model of reading within the broader linguistic frameworks of reading. The review is then followed by a discussion of the model itself and, finally, its expansion into the realm of making sense of idioms in second and foreign languages. The principal assumption underlying K. Goodman's model of reading is that the relationship between target text and idiom transaction forms the basis for building a new theoretical model for comprehending and interpreting VP idioms while reading. The expansion of K. Goodman's theoretical framework into the realm of L2 reading is referred to as *Transactional Idiom Analysis* (TIA): an approach of examining how well L2 learners strategize and transact idiomatic meaning when confronted with VP idioms in a variety of reading tasks. A discussion of theoretical and practical implications of TIA with respect to idiomatic knowledge (as evidenced in the empirical data presented) concludes this article.

Historical Perspective on Reading

Historically, reading has enjoyed much attention in the L2 classroom. During the early decades of this century, approaches to reading were overshadowed by the Grammar-Translation Method—a method which required enormous amounts of memorization and translation. Following traditional instructional methods for classical languages such as Latin and Ancient Greek, L2 learners were regularly required to learn multitudes of grammar rules, do translation exercises, read texts in the original, and respond to text questions orally and in writing. Reading in those years is described by Walsh (1967: 62) as "those years when our students ploughed dutifully through the classics of French or German or Spanish literature, converting great foreign prose into juvenile English at a steady rate of five pages a day."

When the Grammar-Translation Method was replaced with the audiolingual approach in the fifties, the importance of reading dwindled to the delight of those who saw more pedagogical value in teaching speaking and listening skills. During the sixties, reading was viewed as a mere support skill for grammar and vocabulary acquisition. Ever since, reading has remained of diminished third place in importance, closely followed by writing. On a practical level, this situation remains to this day in many foreign language departments, although many methodologists (Chastain, 1988; Goodman, 1996; Krashen, 1982; Liontas, 1991; Liontas & Baginski, 1995; Omaggio, 1993; Rivers, 1968, 1988; Schulz, 1981) have pointed out the need to integrate reading with writing from Day One or as soon as students are able to read in the given language being learned. That there is a close relationship between reading and writing is undeniable. The necessary connection between reading and writing has been summarized effectively by Greenia (1992: 33) who asserts that

Real competence in writing must stem at least in part from the learner's reading a large volume of texts that model the types of prose they will eventually create. Reading allows an individual to acquire a sense of how a given text is forged and presented to a reader.

The sixties were soon followed by an era when researchers advocated a much stronger emphasis on reading as part of a meaning-making process (Goodman, 1967; Smith 1971, 1979). As a result, the pedagogical ground that reading had lost during the audiolingual era soon resurfaced with a vengeance after the demise of that approach in the late 1970s. This increasing emphasis on reading led to a psycholinguistic model or theory of reading, the theoretical perspectives of which were taken and expanded upon by L1 and L2 researchers alike during the 1980s (Bernhardt, 1983a, 1983b, 1986; Coady, 1979; Goodman, 1985, 1992, 1996; Smith, 1971, 1979, 1982; Swaffar et al., 1991).

It was only during the 1980s, however, that volumes of books, language journals, and articles focused our attention on reading in a second or foreign language (e.g. Alderson and Urquhart, 1994; Bernhardt, 1991a, 1991b; Grellet, 1981; Ulijn, 1977; Ulijn and Kempen, 1977; Swaffar et al., 1991). This phenomenon was part of the general (and unprecedented) boom in literature on reading that has occurred during the past twenty years. For example, between 1974 and 1984, well over 200 journal articles and books were published on reading alone (see, for example, the bibliography compiled by MacLean, 1985). The sheer volume of entries suggests the tremendous desire of researchers and

practitioners alike to understand better the process of reading. For an excellent review of twenty-five years of reading instruction, see Silberstein, 1987.

Since the mid-eighties, there has been a significant shift toward describing the reading process either in terms of skills and knowledge areas within a cognitive process or in terms of metaphors, the most common of which are the bottom-up approaches, the top-down approaches, and the interactive approaches (see, for example, Bernhardt, 1983a, 1983b, 1986, 1991a, 1991b; Chun and Plass, 1997; Grabe, 1991; Rumelhart, 1977, 1984; Stanovich, 1980; Swaffar et al., 1991). The following section summarizes these approaches.

Bottom-up, Top-down, and Interactive Processing Models

Positing a strong cognitive perspective, bottom-up processing models (e.g. LaBerge and Samuels, 1974) are data-driven, emphasize lower-level processes such as letter and word recognition, and most importantly, emphasize textual decoding due to the primary priority placed upon the text as input. In contrast, top-down models (e.g. McConkie and Rayner, 1976) place primary emphasis on prior knowledge which the reader brings into the process of reading to render an interpretation. Unlike bottom-up models that start out with letter and word recognition, top-down models are content-driven and hypothesize the "sampling" of text, into which inferences are made via the help of the reader's prior syntactic and semantic knowledge.

Instead of positing a sequential processing mode, interactive approaches to reading (e.g. Dell, 1995; Marslen-Wilson, 1975; Rumelhart, 1977, 1984) recognize the simultaneous interaction of both lower-level processing skills (identification and decoding) and higher-level reasoning and comprehension skills (inferencing and interpretation). As Grabe (1991: 383) asserts, "reading involves an array of lower-level rapid, automatic identification skills and an array of higher-level comprehension / interpretation skills." The concept of interaction is based on the assumption that there is a complex cognitive psychological relationship between reader and text, and a simultaneous activation of readers' multiple component skills and their background world knowledge as they attempt to (re)construct the information present or implied in the text.

Two examples of interactive processing models are those theorized by Stanovich (1980) and Swaffar et al. (1991). Stanovich claims that the development of reading fluency needs to be viewed as an "interactive-compensatory" model of individual differences wherein readers compensate for deficiencies at the word level (lower level) by relying more on context (higher level). In similar vein, Swaffar et al. assess readers based on their affective factors such as motivation and different learning styles, their background world knowledge, and their linguistic knowledge. Their integrated approach to language learning is founded on the belief that readers engage in reading for *meaning*.

One interactive approach that enjoyed particular popularity was the Constructivist Model advanced by Bernhardt (1986). This model, influenced greatly by K. Goodman's (1967) and Coady's (1979) psycholinguistic model, includes the following six elements: prior knowledge, word recognition, phonemic/graphemic features, metacognition, syntactic feature recognition, and intratextual perceptions (i.e., "how the reader perceives and then reconciles each part of the text with the preceding and succeeding discourse context," Bernhardt, 1991a: 122). The end result of these interacting factors is comprehension. This model evolved from data on recall protocols (Bernhardt, 1983a, 1983b).

An important contribution of this model is its underlying notion that reading involves readers, *not* just the reading text (Bernhardt, 1986, 1991b). That the reading process comprises the interaction of reader and text is in fact the central tenet of this approach. Another important contribution of this model is the keen observation that comprehension of a reading passage may be impeded when that passage contains unfamiliar cultural referents, a finding also found in the research of Ono and Nyikos (1992). It is quite possible that this observation alone has lead many language practitioners to a more careful selection of authentic materials for L2 reading purposes and assessment. Bernhardt's advocating immediate recall protocols to assess text comprehension has sparked an intense debate among language professionals and researchers that continues to this day (see, for

example, Ericsson and Simon, 1984, 1987; Johnston, 1983; Lee, 1986; Meyer, 1985; Swaffar et al., 1991). Despite possibly conflicting results, recall protocols do offer L2 reading instructors a "real-life" assessment tool that gives immediate diagnostic results: results that can then be used to modify and fine-tune instructional practices as well as the selection of culturally authentic reading materials. Despite the grounding of this model in empirical studies, however, it does not account for affective factors such as anxiety, self-confidence, and motivation, even though their pertinent role in L1 and L2 reading has long been acknowledged to have an effect on metacognition and text comprehension (Kern, 1988, 1989, 1992, 1994).

In sum, it can be argued quite convincingly that positing a solely bottom-up or top-down processing model for reading will fail to capture the complex interactive nature of the reading process. Alternatively, an interactive approach to reading appears to offer a better explanation of the cognitive processes believed to be at work here. Yet notwithstanding this model's improved explanatory power, it is unclear how the interactive, or indeed any of these processing models, can be translated into effective, simple-to-use teaching practices with long-lasting results.

It is also important to note here that many of these approaches overlap, thus making absolute distinctions and comparisons difficult to detect. Nevertheless, these approaches have underscored current research efforts; some of them have considerably influenced current thinking in the teaching of reading, while others continue to shape our understanding of reading and reading comprehension. One of the most prominent theories on reading to date has been the transactional socio-psycholinguistic theory of reading, writing, and written texts originally advanced by Kenneth Goodman in 1967 and refined throughout the next three decades. The next section takes a close look at the theoretical foundation of Goodman's theory and the important pedagogical implications it holds for producing proficient readers; that is, readers who read for comprehension.

A Look at the K. Goodman Model

Unlike all other models and approaches to reading, K. S. Goodman's (1967, 1985, 1992, 1996) *transactional socio-psycholinguistic theory of reading* is the only one to the researcher's knowledge that, first, spans over three decades of continuous empirical research and, second, links reading with writing and written texts—an equation which has been largely ignored in all other models and approaches to reading. Miscue analysis, as developed by K. Goodman and his colleagues, has significantly influenced the understanding and practice of teaching reading. Since the mid-sixties, hundreds of readers with wide-ranging abilities, and with broad cultural and linguistic backgrounds, have been used to build his methodology of reading miscues. To date, nearly eight hundred research studies and dozens of dissertations have been undertaken to test empirically the theory and the ensuing taxonomy that analyzes and categorizes the miscues readers make during reading of whole texts.

Although miscue analysis has undergone some transformation over the years (K. Goodman, 1968, 1969, 1979, 1985, 1994), most research has been based upon K. Goodman's three original cueing systems: the graphophonic, the syntactic, and the semantic. From "comprehension-centered" (K. Goodman, 1970), to "meaning-centered" (K. Goodman, 1973) to "whole language" analyses (Goodman and Goodman, 1981), miscue analysis has grown to become one of the most influential models of reading. One of the advantages of Goodman's theory is that it provides an integrated model to describe the reading process. Here, some of the most important tenets of this theory, the process of reading itself, and the elements that comprise this theory will be explained.

K. Goodman's Transactional Socio-Psycholinguistic Theory Of Reading

According to K. Goodman, reading is *making sense* of the text. The text is not viewed as controlling a passive reader; instead, the reader is seen as an active user of language. As a reader reads, the text must be sampled and interpreted through the reader's unique personal background knowledge and experience. The active involvement of the reader with print and meaning—not words—thus grounds Goodman's focus. The reader is rather seen as central to the act of reading: the reader's reaction to particular pieces of print on a page that may or may not have connections to larger contexts is

of secondary importance.

Furthermore, in making sense (i.e., in constructing meaning), the reader constructs his or her own text parallel to the printed text. The reader behaves in such a manner because a text is never a complete representation of the writer's meaning. Since much needs to be inferred during the reading process, the reader can only comprehend that which s/he brings to the "transaction" of reading (as did the author who wrote the text). This explains the construction of a parallel text by the reader. Using the smallest amount of available text information and one's own existing linguistic and conceptual schemata to build meaning, both the knower and the known are transformed in the process of reading—a tenet not found in any of the other models or approaches to reading thus far reviewed. Expressed more precisely, the reader is transformed as new knowledge is assimilated, adopted, and accommodated (Piaget's notions).

Throughout these transactions with the text, the reader's schemata are also transformed through reading comprehension. In the process, both the knower and the known are changed in the course of knowing (Dewey's notions), a view also echoed in the literature work of Louise Rosenblatt (Rosenblatt, 1981). A new parallel text emerges as a result. As K. Goodman (1992: 19) argues, "construction of the text is a necessary concomitant of the construction of meaning." Therefore, effective reading involves making sense of print, *not* accurate word identification. Viewed under such a lens, it becomes obvious that *meaning is in both the reader and the writer*, and not inherently in the text itself: a phenomenon that becomes evident when readers later relate what they have read.

Making sense of print is, by any account, not an easy task. For K. Goodman, the only feasible way to discover what readers do when they read was to investigate the meaning-making processes of readers while they read out loud whole stories that they had not seen before. During their reading, it was discovered that readers made *miscues*, not errors as would be argued by those who believe that reading is a sequential word identification process. In other words, K. Goodman found that his readers produced unexpected responses to the text. As a result, the miscues he discovered became for him "windows on the reading process" (Goodman, 1992: 3). If readers use cues in the text to construct meaning, he consequently hypothesized, reading cannot possibly be a passive process. Instead, reading must be a receptive language process where readers are active users of language.

This led K. Goodman to believe that the effects of the graphophonic, syntactic, and semantic aspects of texts on reading needed to be investigated more closely if he was to create an adequate model of the reading process, a theoretical base for effective reading instruction and reading development. He argued that if reading is making sense of written language, then it must be a psycholinguistic process. As such, his developing transactive model of reading had to incorporate the notion that "a theory of reading must include the relationships of thought and language" (K. Goodman, 1992: 4). Not only were readers found to make active use of the graphophonic, syntactic, and semantic cues as they inferred and predicted where the text was going, but they also responded very similarly to common texts they read and were found to produce some identical reading miscues at key points in these texts. K. Goodman translated these insights into a theory he called the "Transactional Sociopsycholinguistic View on Reading, Writing, and Written Texts" (K. Goodman, 1985, 1992, 1996).

In an annotated bibliography by Brown, Goodman, and Marek (1996) there are 918 studies that employ miscue analysis. Miscue data obtained demonstrate the relationship between different levels of context using the three cueing systems most referred to in reading research: the graphophonic, the syntactic, and the broadly inclusive semantic system. (For an excellent text on reading miscue inventory, its procedures, and coding forms, see Y. Goodman, Watson, and Burke, 1987). Study after study has validated the claims made in K. Goodman's theory that reading is a meaning-seeking, tentative, selective, and constructive process, and that inference and prediction are key to successful reading. Empirical data from second language studies of miscues that support K. Goodman's hypothesis can be found in Benitez (1984), Bianchi (1980), Coll and Osuna (1989), Fuller (1989), Hodes (1981), Rigg (1977), and Whitmore and Crowell (1994).

In retrospect, it is simplistic to argue that K. Goodman's theory of reading is solely a "top-down" reading model given the detailed explanation of the language cue systems (symbolic, structural, and

meaning), the cognitive strategies (acts of reading), and the cycles (visual, perceptual, syntactic, and semantic) of reading present in his model. Indeed, all of these *must* be considered if reading is to be studied as a holistic process. Translating these various cue systems, cognitive strategies, and cycles of reading into a practical pedagogy and into authentic literacy experiences for our developing L2 learners, however, is a crucial task that now lies ahead for second- and foreign-language researchers. This is the issue to which the discussion now turns.

Expanding K. Goodman's Theory of Reading to VP Idioms

Traditionally, students' reading ability was evaluated chiefly by asking "factual" or noninterpretational questions about reading material. Unfortunately, when students could not demonstrate this level of comprehension, they were simply regarded as poor readers, because reading comprehension was regarded chiefly as an *information-transfer process* in which the text was the reader's source of "factual" information and unambiguous meaning. In contrast to this traditional model, as already discussed, K. Goodman and his colleagues argue for a reading process through which meaning is produced both from the text and from what readers bring to the reading act (schema theory). Effective comprehension thus requires the ability to relate texts to readers' prior knowledge, since readers' personal and cultural background knowledge affects their interpretation and comprehension (Johnson, 1982; Kramsch, 1988; Lafayette, 1988).

Given these considerations, one of the goals of reading research has been to investigate learners' reading strategies and the use of their cultural background knowledge for comprehension (Anderson, 1991; Kern, 1989, 1994). Reading comprehension is clearly *not* a mere grammar-rule application process or the processing of print in an orderly sequence as the reader meets words on the line. Instead, reading is a sampling, selecting, predicting, comparing and confirming activity that is both continuous and interactive/integrative in nature, wherein perception, hypothesis building, and prediction all operate together in concert. Even more importantly, readers sample from print on the basis of predictions they have made as they seek textual meaning—the ultimate goal of reading. Therefore, it would seem illogical for readers to disengage from this meaning-making process when encountering idiomatic expressions in a text.

According to K. Goodman (1996: 91), the construction of meaning is the result of effective and efficient reading, and defines proficient reading as follows:

Proficient reading is both *effective* and *efficient*. It's *effective* in that the reader is able to make sense; it's *efficient* in that this is accomplished with the least amount of time, effort and energy. An *efficient* reader uses only enough information from the published text to be *effective*.

This definition is further qualified by K. Goodman's statement that different readers will make sense of any given text in different ways, depending on what each reader brings to the reading process in terms of knowledge, experience, interests, and values, no matter what the degree of each reader's proficiency. A reader's comprehension is further constrained by his or her cultural belief system and societal paradigms. Reading thus involves the interaction of three basic levels from which meaning flows: the graphophonic, the lexico-grammatical, and the semantic-pragmatic. Reading comprehension results when readers, in transacting with the text to make their own sense, use information from all three levels simultaneously. K. Goodman (1996: 92) sees this cyclical process as follows:

To get from the visual input our eyes provide to our brains to the meaning our brains construct, we must go through four cycles: visual, perceptual, syntactic and semantic. It helps to think of this as a continuous process in which, once we begin to read (receive the visual input), each cycle follows the preceding one. The situational context in which we begin reading immediately sets up meaning expectations that influence

what we're looking for when we look at the print.

It is important to note here that Goodman does not perceive reading to be a linear process. To the contrary, he argues that during the construction of meaning, more often than not, we can and do leap ahead of the cyclical process precisely because we are constantly leaping to tentative conclusions while being on the lookout for conflicting information that may force us to construct a new meaning. The end result: our brain shifts from processing language to processing meaning due to the transition of the syntactic/lexico-grammatical cycle. This fourth and last cycle, the integration of the entire reading process, he calls the *semantic* cycle-the cycle in which meaning is constructed. The semantic system is defined as the set of meanings as organized in concepts and conceptual structures.

Although K. Goodman admits that this final cycle would have been best served by the designation "semantic-pragmatic" (K. Goodman, 1996: 105), his model of proficient reading does not explicitly address pragmatics despite his discussion of Piaget's cognitive schema theory of assimilation and accommodation in the construction of meaning (Piaget and Inhelder, 1970), and Halliday's views on the integration of experiential, interpersonal, and textual meaning (Halliday, 1975, 1978). It is within this area of discussion, however, that K. Goodman's (1994) transactional socio-psycholinguistic model of reading could be expanded successfully to meet new demands placed upon the model when the focus is shifted from reading in general to the processing of idiomatic expressions in particular.

As already seen, in miscue analysis all three levels of linguistic information-the graphophonic, syntactic, and semantic-are, at a minimum, recognized as meaning-carrying systems. It is significant that in terms of miscue analysis, the semantic-cueing system in particular represents the nature of meaningfulness. Within this context, then, if the meaning of an idiomatic expression were contained within its individual words, the addition of a *pragmatic* cycle to Goodman's model would be superfluous. On the other hand, if readers are found to re-read a text and re-assign meaning different from that of the semantic meaning long after they have accessed the syntactic/lexico-grammatical cycle of the text, the addition of a pragmatic cycle may be increasingly necessary to explain the construction of meaning.

It follows logically that if the goal of L2 reading is to make sense of printed text-for that is truly the only reason why we read at all-language instructors are well advised to evaluate the reading strategies of their students and the pragmatic cues they use in transacting idiomatic meaning. It is suggested that such an evaluation is possible via the employment of a *Transactional Idiom Analysis* (TIA). The tenets of this analysis are presented next.

Transactional Idiom Analysis (TIA)

How do readers change text as they transact with it in constructing idiomatic meaning? What strategies do readers employ in the comprehension and interpretation of idioms? The answers to these questions can be found if readers' conceptions of meaning are explored, but this has rarely been done in studies to date. *Transactional Idiom Analysis* (TIA) suggests the utility of such an exploration by recognizing both the centrality and the constructive capability of the individual reader. It is founded on the belief that in order to obtain a systematic understanding of the idiom transaction process, it is necessary to explore a multitude of factors. It thus places the reader at the center of study but also emphasizes the importance of prior knowledge, inferencing and reader activity on the understanding of idioms. Grown largely out of insights and principles derived from miscue analysis data with second and foreign language learners over the past five years, TIA further advances the notion that reading is an integrative, ongoing process which reflects the dynamic creation of human thought and that readers teach themselves and learn from their mistakes. This realization, as powerful as it is, is hardly new in the annals of literature research. In fact, Edward L. Thorndike (1917: 323) had already suggested that reading was a process of thought, related to that of reasoning:

Reading is a very elaborate procedure, involving a weighing of

each of many elements in a sentence, their organization in the proper relations one to another, the selection of certain of their connotations and the rejection of others, and the operation of many forces to determine final responses. In fact... the act of answering simple questions about a simple paragraph... includes all the features characteristic of typical reasoning.

While Thorndike's recognition of how thinking occurs is an important one, it does not take into account the creation of meaning. TIA, on the other hand, makes explicit the nature of reading as a unitary creative process. Not only does TIA recognize that there are many different systems of knowledge, it also employs all four cueing systems—the graphophonic, the lexico-grammatical, the semantic, and the *pragmatic* - to explain what readers do during the event of reading as a transactional process, and anchors this from the reader's point of view. Because all four cueing systems are used simultaneously within a broader sociocultural context, all are necessary to explain L2 reader behavior.

Consequently, the main goal of TIA is to characterize learners' underlying knowledge of L2 idioms; that is, to describe and explain (and predict where possible) their L2 competence. In particular, the main aim of TIA description is to uncover the regularities and systematicities in learners' development and control of L2 idiomatic knowledge; in other words, to reveal how learners develop idiomatic knowledge of an L2 from available input and how they use this knowledge in communication. A second goal of TIA is to specify the factors that cause variation in individual learners' accomplishments of this task. TIA suggests that the factors impeding / enhancing idiom comprehension and interpretation can only be fully identified and accounted for if a range of possible factors that affect idiom understanding are taken into account. This approach also suggests that different factors may be important at different stages of learners' development.

Expressed differently, TIA is concerned both with what learners know about idioms in general and with what they know about how they are used in communication. It is especially concerned with identifying the factors that impede or enhance idiom comprehension and interpretation. The only way to obtain good data on these factors, however, is through the systematic observation of learners: TIA provides an approach of analyzing such observations in a manner that can reveal the linguistic systems that learners use to process idioms. TIA analyses are very promising because they seem to afford a window through which to view how learners comprehend and interpret idioms in second language contexts.

Given this focus, the aim of TIA is *not* to translate print into sound or to consider print without engaging the reader's comprehension of what is being read. Instead, TIA views readers as generative epistemic participants in the development of knowledge. Uncharacteristic of previous theories, TIA accepts readers as active participants who deliberately construct interpretations. In fact, it places the reader in control of the constructive nature of the reading process. Through TIA, an expanded understanding of how readers make sense of idioms can be gained. TIA not only reveals a reader's active thought processes, strategies, and meaning construction; it also provides theoretical grounds for exploring what a reader brings to print during text comprehension (in general) and idiom understanding (in particular) and how the researcher might best design idiom learning strategies.

Readers' base of knowledge, coupled with their sociocultural backgrounds greatly influence the reading process. This has important implications for the classroom setting; TIA in fact affords instructors a bird's-eye view of these influences upon the reading process, which helps them understand why L2 learners "mistakenly identify" idioms as they read. It consists of analyzing readers' idiom explanations and difficulties encountered when reading an authentic text, in particular the way they make sense of idioms and the sources of textual information and prior world knowledge they use in arriving at plausible explanations for them. The misinterpretation of deceptively transparent words such as idioms (i.e., the erroneous belief by the reader that the meaning of the whole equals the sum of meanings of its parts) has been referred to by Huckin and Bloch (1993) as cases of "mistaken ID." Possibly the most important contribution of TIA successfully

employed in Liontas' (1999) study, is the opportunity to infer something about readers' abilities from the quality, not quantity, of "mistaken IDs" they make while reading by integrating top-down (concept-driven) and bottom-up (data-driven) processes simultaneously.

These "mistaken IDs" that learners make are significant in three ways: (1) they provide teachers with information about how much the learner has processed; (2) they provide the researcher with evidence of how an idiom was comprehended and interpreted; and (3) they serve as devices by which the learner discovers the connection between appropriateness of text and idiomatic meaning. Researchers should therefore be concerned with establishing the source of the "mistaken ID;" that is, accounting for why it was made. This is why it is necessary to know what learners do correctly as well as what they do incorrectly. "Mistaken IDs" can be collected either cross-sectionally (i.e., at a single point in time) or longitudinally (i.e., at successive points over a period of time) to afford valuable insights into the process of idiom understanding. They also serve as data for investigating a specific research question (e.g. How do readers change text as they transact with it in constructing idiomatic meaning? What strategies do readers employ in the comprehension and interpretation of idioms?).

It is suggested that cases of "mistaken ID" are an inevitable feature of the idiomatic interpretation and learning process. Coupled with learners' (meta)cognitive introspections, "mistaken IDs" provide one of the best ways of discovering what it is in idiomatic input that learners attend to. Said another way, they provide evidence about the individual's mental processes (language information) and the amount of time, effort, and energy L2 readers bring to the act of reading and the understanding of idioms. When used in TIA, they facilitate the investigation of the interplay of the various graphophonic, syntactic, semantic, and pragmatic systems of language in the reading process as well as the emerging pattern of reading strategies L2 readers employ while they read.

TIA allows both researchers and language practitioners to investigate closely why readers tend to pay more attention to the graphic system than to the sound system as they read, how grammatical cueing systems (the syntactic structures of the author's text) influence what readers read and, finally, how these systems are controlled and rearranged by the reader. In short: TIA, centered upon the reader, rather than upon the text, reveals the continuous *reconstructive* process between the idiomatic meaning of the author and that of the reader as the latter tries to create a coherent understanding of the text (i.e., gain idiom understanding by transacting meaning from the text).

Logically, language instructors should not be too quick to judge or evaluate a learner's reading ability based on the comprehension of idiomatic expressions alone. Instead, what instructors interested in a TIA evaluation should do is to look at the VP idioms that interfere with the reader's ability to reconstruct the author's meaning of them and to disregard those that do not. In so doing, patterns of contextual influences are revealed where previously only chaos was apparent; this, in turn, enables language practitioners to begin to understand both the reading process and the degree to which students are proficiently comprehending VP idioms in the target language.

Indeed, it is comprehending (a process) rather than comprehension (an end) that TIA stresses. This is consistent with the findings and implications of miscue analysis from which TIA was developed. According to K. Goodman (1979: 658),

Reading depends on the use of strategies for comprehending, that is constructing meaning in [transaction] with texts.... Comprehension is what is, in fact, understood. The latter always is the combined result of what the reader understood prior to reading and the effectiveness of comprehending.

Gaining comprehension of the text being read, let alone comprehension of target language VP idioms, is undisputedly a significant reading challenge for L2 learners, and is at times difficult to isolate from other factors affecting the process of idiom comprehending. This is not to say that one cannot effectively assess text and idiom comprehension. Rather, it is to suggest that insights into

the reader's overall comprehension can be gained from the reader's think-aloud performance as well as from the retelling of the text that follows the reading.

The retelling procedure often reveals ongoing processing and is therefore a significant feature of the TIA process. It is included here for two reasons. First, retellings clarify ensuing interpretations of the reader's construction and representation of idiomatic meaning, which become meaningful only through the discovery of where greater levels of context are shown to be managed. Second, retellings allow the examination of a reader's interpretation of a reading. It is therefore important to bear in mind that prior to asking L2 learners to engage in think-alouds and/or retellings, we should first ascertain that their conceptualization of the "retelling" and/or "think-aloud" task is closely aligned with ours. Consequently, such an alignment will eliminate a potential misreading and misinterpretation of obtained results. Instructors are again counseled not to pay too much attention to the recalling of fine details but to the inferences readers are able to draw successfully from the text aspects of characterization and theme in the text concerned.

The following section presents a summary of seven TIA sessions employed in Liontas' (1999) study of VP idiom understanding across Spanish, French, and German. Due to space constraints only the *Zero Context Task* (ZCT) and the *Full Context Task* (FCT) are presented below. (For a more complete account of all TIA procedures, see Liontas, 1999; see also Liontas, 1997, 2001)

Empirical Evidence Supporting Transactional Idiom Analysis (TIA)

Seven unpaid student volunteers (from a total of 600 students enrolled in twenty sections of third-year Spanish, French, and German language courses at Arizona State University during Spring 1999) were selected at random for a study of the comprehension and interpretation of *Vivid Phrasal* (VP) idioms (i.e., vivid multilexemic figurative units). Specifically, the aim of the study was to investigate the differences involved in processing different VP idiom subtypes—matching (Lexical-Level or LL) idioms between L1 and L2, partially-matching (Semi-Lexical Level or SLL) idioms between L1 and L2, and non-matching (Post-Lexical Level or PLL) idioms between L1 and L2—when such idioms are presented both with and without texts supporting their idiomatic meanings. To achieve this aim, all participants were asked to engage in the same two computer-mediated interactional video (CMIV) tasks: a *Zero Context Task* (i.e., a total of 15 VP idioms for each of the three language groups, 5 per idiom subcategory, was presented without any contextual support) and the *Full Context Task* (i.e., same 15 VP idioms from the previous ZCT were presented with the context from which they had been previously extracted). Table 1 presents the 45 VP idioms chosen for this study, including the order of presentation, subtype, literal, and idiomatic meaning in English of each VP idiom.

Table 1: Overview of Zero and Full Context Task Idioms

ZERO AND FULL CONTEXT TASK

No	SPANISH IDIOMS	TYPE	LITERAL TRANSLATION	IDIOMATIC MEANING
1	me dejó en alto y en seco	LL	to leave someone high and dry	to leave someone high and dry
2	él que le quede el guante que se lo plante	SLL	If the glove fits, wear it!	If the shoe fits, wear it!
3	toda la carne en el asador	PLL	to put all the meat on the spit	to put all the eggs in one basket
4	perdió hasta la camisa	LL	to lose one's shirt	to lose one's shirt
5	le estaban tomando el pelo	SLL	to pull one's hair	to pull one's leg
6	es el colmo y la última gota que hace rebosar la copa	PLL	the last drop that makes the glass overflow	the straw that broke the camel's back
7	yo creo que mis ojos eran más grandes que mi estomago	LL	the eyes are bigger than one's stomach	the eyes are bigger than one's stomach
8	echar leña al fuego	SLL	to throw wood on the fire	to throw fuel on the fire
9	sacar las castañas del fuego a alguien	PLL	to pull the chestnuts out of the fire for someone	to save someone's neck
10	agarró el toro por los cuernos	LL	to take the bull by the horns	to take the bull by the horns
11	habrá costado un ojo de la cara	SLL	to cost an eye of the face	to cost an arm and a leg
12	está buscándole pelos al huevo	PLL	to look for hair on the egg	to split hairs
13	le falta un tornillo	LL	to have a screw missing	to have a screw missing
14	¡Caen chuzos de punta!	SLL	to rain sharp-pointed spears	it's raining cats and dogs
15	se subió a la parra	PLL	to climb up the grapevine	to hit the ceiling

No	FRENCH IDIOMS	TYPE	LITERAL TRANSLATION	IDIOMATIC MEANING
1	jeter l'argent par les fenêtres	LL	to throw money out the window	to throw money out the window
2	bâtit des châteaux en Espagne	SLL	to build castles in Spain	to build castles in the air
3	chercher la petite bête	PLL	to look for tiny beasts	to split hairs
4	avoir les yeux plus grands que le ventre	LL	to have eyes bigger than one's stomach	to have eyes bigger than one's stomach
5	être au bout du rouleau	SLL	to be at the end of the roll	to be at the end of one's rope
6	casser du sucre sur le dos de quelqu'un	PLL	to break sugar on someone's back	to talk about someone behind his or her back
7	prendre le taureau par les cornes	LL	to take the bull by the horns	to take the bull by the horns
8	jeter de l'huile sur le feu	SLL	to throw oil on the fire	to add fuel to the fire
9	rôti le balai	PLL	to roast the broom	to lead the high life
10	suivre les traces de quelqu'un	LL	to follow in someone's footsteps	to follow in someone's footsteps
11	sauter au plafond	SLL	to jump to the ceiling	to hit the ceiling
12	casser les pieds à quelqu'un	PLL	to break someone's feet	to get on someone's nerves
13	chercher une aiguille dans une botte de foin	LL	to look for a needle in a haystack	to look for a needle in a haystack
14	passer au peigne fin	SLL	to pass through a fine comb	to go through something with a fine-toothed comb
15	mettre quelqu'un en boîte	PLL	to put someone in a box	to pull someone's leg

No	GERMAN IDIOMS	TYPE	LITERAL TRANSLATION	IDIOMATIC MEANING
1	eine Schraube locker haben	LL	to have a screw loose	to have a screw loose
2	den Stein ins Rollen bringen	SLL	to get the stone rolling	to get the ball rolling
3	mit dem linken Fuß zuerst aufstehen	PLL	to get up with the left foot first	to get up on the wrong side of the bed
4	die Katze aus dem Sack lassen	LL	to let the cat out of the bag	to let the cat out of the bag
5	den Boden unter den Füßen wegziehen	SLL	to pull the earth under someone's feet	to pull the rug out from under someone's feet
6	eine Hand wäscht die andere	PLL	one hand washes the other	you scratch my back, I scratch yours
7	das Geld zum Fenster hinaus werfen	LL	to throw money out the window	to throw money out the window
8	in den sauren Apfel beißen	SLL	to bite into the sour apple	to bite the bullet
9	die Würmer aus der Nase ziehen	PLL	to pull the worms out of the nose	to pull teeth from a mule
10	die Augen sind größer als der Magen	LL	the eyes are bigger than one's stomach	the eyes are bigger than one's stomach
11	jemanden auf dem Trockenen sitzen lassen	SLL	to leave someone in a dizziness	to leave someone high and dry
12	Kopf und Kragen riskieren	PLL	to risk one's head and collar	to stick out one's neck
13	Leute, die im Glashaus sitzen, sollten keine Steine werfen	LL	people who live in glass houses should not throw stones	people who live in glass houses should not throw stones
14	es regnet junge Hunde	SLL	it's raining young dogs	it's raining cats and dogs
15	jemanden auf den Arm nehmen	PLL	to take someone on one's arm	to pull someone's leg

Both tasks required participants to engage in reading alouds and think-alouds (on-line measures) and retrospections and pointed interview questions (off-line measures) in an effort to uncover the regularities and systematicities in transacting idiomatic meaning (as the figurative meaning of a given VP idiom cannot be readily computed from a linear linguistic analysis of the graphophonic, syntactic, and semantic elements it contains). The CMIV subject pool of 7 volunteers (2 participants in Spanish, 3 in French, and 2 in German) met individually with the researcher at a mutually agreeable time in the researcher's office. Their performance in the two tasks, lasting on average 90 minutes, was both audiotaped and videotaped. All recordings were then labeled for future identification and transcribed as a text document for subsequent data analysis.

The qualitative data were first analyzed for recurring thematic units present in the introspective/retrospective protocols of the participants and in their idiom interpretations (indicating where possible such features as pause length, intonation contours, vowel lengthening, fillers, drawls, mutterings, and false starts). Video recordings were examined for body language. For instance, in the analysis of video data, changes of posture, exclamations, facial expressions, and wandering eyes, among other motions, were identified and noted as significant. Table 2 presents a summary of all ZCT and FCT data obtained in this study, as well as the ZCT time performance data and indices of the increase in idiom performance from the ZCT to the FCT. All data are expressed in percentages. This information is displayed graphically in [Figures 1-4](#).

Table 2: Summary of ZCT and FCT Data

		ZCT	SPANISH	FRENCH	GERMAN	LANGUAGES
CMIV	LL		90.00	80.00	100.00	90.00
	SLL		40.00	40.00	70.00	50.00
	PLL		45.00	20.00	30.00	31.67
Group Total			58.33	46.67	66.67	57.22

		ZCT TIME	SPANISH	FRENCH	GERMAN	LANGUAGES
CMIV	LL		18.03	28.22	25.68	23.98
	SLL		38.99	32.75	33.33	35.03
	PLL		42.98	39.02	40.98	40.99
Group Total			100.00	100.00	100.00	100.00

		FCT	SPANISH	FRENCH	GERMAN	LANGUAGES
CMIV	LL		100.00	100.00	100.00	100.00
	SLL		90.00	100.00	100.00	96.67
	PLL		95.00	80.00	100.00	91.67
Group Total			95.00	93.33	100.00	96.11

		ZCT / FCT	SPANISH	FRENCH	GERMAN	LANGUAGES
CMIV	LL		10.00	20.00	0.00	10.00
	SLL		50.00	60.00	30.00	46.67
	PLL		50.00	60.00	70.00	60.00
Group Total			36.67	46.66	33.33	38.89

Figure 1: Summary of ZCT Data

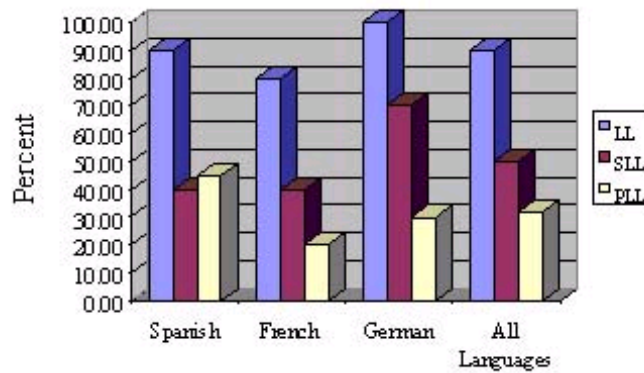


Figure 2: Summary of ZCT Time Data

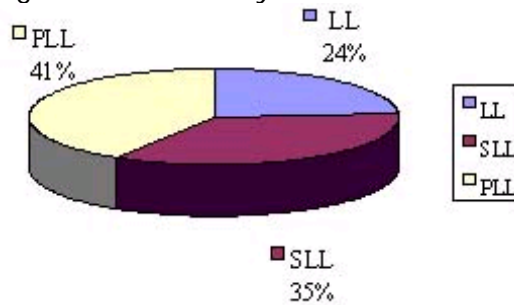


Figure 3: Summary of FCT Data

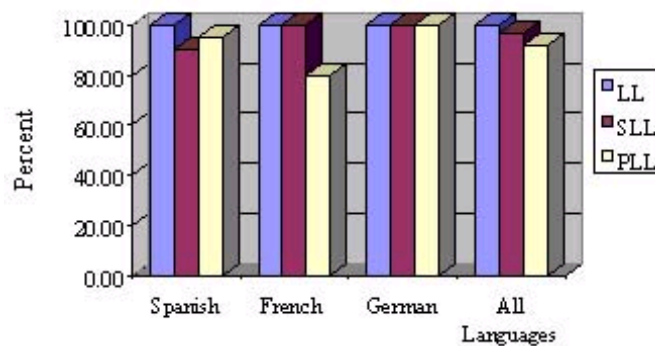
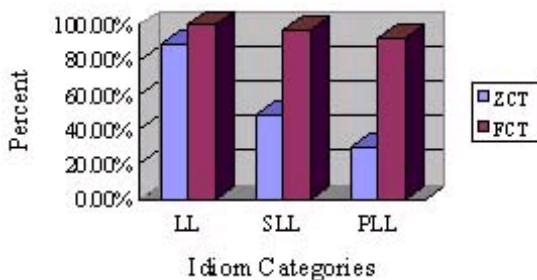


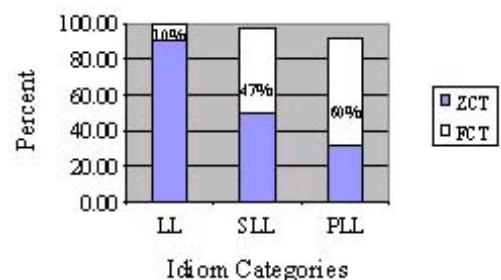
Figure 4A: Increase in Performance from

Figure 4B: Increase in Performance from

ZCT to FCT



ZCT to FCT



What becomes immediately apparent from an inspection of the ZCT data is that learners' overall idiom performance ranges from a low of 46.67 percent (French Group) to a high of 66.67 (German Group); and that success is consistently greater at the LL than at the SLL or PLL categories combined. The difference between LL and PLL idioms for all languages is nearly three times as much as between SLL and PLL idioms, whereas the difference between LL and SLL idioms is nearly twice as much as between SLL and PLL idioms. Similarly, the ZCT time difference between LL and PLL idioms for all languages is more than eight times as much as between SLL and PLL idioms, whereas the difference between LL and SLL idioms is more than seven times as much as between SLL and PLL idioms. This time pattern of success is congruent throughout all language groups. Taken together, the ZCT data supports the following conclusion: out of context, LL idioms are processed much faster and with greater ease than SLL idioms which, in turn, are processed faster and with greater ease than PLL idioms.

Regarding the FCT data, two further findings deserve mention here: (1) context had the most powerful effect on the interpretation of PLL idioms: 60 percent total. Within this category, the effect was as little as 50 percent (Spanish Group) and as much as 70 percent (German Group). Similar high percentage increases were also noted in the SLL category: 46.67 percent total. The least effect was observed in the LL category (10 percent total) where the percentage increase drops to the range of zero percent (German Group) and twenty percent (French Group), due to the high score already achieved with such idioms in the ZCT. Combined, these results support the claim that context has a powerful facilitative effect on the comprehension and interpretation of VP idioms, especially on the PLL type. This is evident in the increase of scores for each idiom type and language group from ZCT to FCT. The nearly 39 percent increase in idiom performance from ZCT to FCT is clearly displayed in [Figures 4A and 4B](#) above. What is not so clear, however, is the types of reading strategies used by the individual participants in both experimental tasks. Even more importantly, it is less clear through an inspection of the ZCT and FCT data alone how similar or different the overall reading behavior of these seven participants was in this study. It is precisely in this domain that *Transactional Idiom Analysis* (TIA) offers the most comprehensive insights. Tables 3 and 4 present a summary of the ZCT and FCT strategies employed by the seven participants in each respective language. All data are given first in numeric values of total tallies, followed by the total percent that each strategy occupies in the total scheme of strategies. Figures 5 and 6 present this information graphically.

Table 3: Summary of ZCT Strategies

All ZCT Strategies		Spanish	Spanish Percent	French	French Percent	German	German Percent	Total	Percent of Total Responses
1	Translation	20	26.32	32	32.99	23	37.10	75	31.91
2	Guessing	2	2.63	1	1.03	3	4.84	6	2.55
3	Guessing of Key Word	5	6.58	3	3.09	7	11.29	15	6.38
4	Guessing of Two Key Words	8	10.53	10	10.31	6	9.68	24	10.21
5	I Have No Idea / I Do Not Know	5	6.58	12	12.37	3	4.84	20	8.51
6	Sounds / Seems / Looks Like	12	15.79	6	6.19	5	8.06	23	9.79
7	Lack of Vocabulary	8	10.53	4	4.12	0	0.00	12	5.11
8	Exact Idiom in English	10	13.16	12	12.37	10	16.13	32	13.62
9	Prior Knowledge	0	0.00	1	1.03	0	0.00	1	0.43
10	Cannot Think of English Idiom	2	2.63	2	2.06	1	1.61	5	2.13
11	Lack of Context	0	0.00	0	0.00	0	0.00	0	0.00
12	Graphophonics / Arrangement	1	1.32	0	0.00	1	1.61	2	0.85
13	Frustrated / Confused / Annoyed	0	0.00	0	0.00	0	0.00	0	0.00
14	I Am Inventing Own Meaning	0	0.00	2	2.06	0	0.00	2	0.85
15	Literal Meaning No Help	0	0.00	5	5.15	0	0.00	5	2.13
16	Unable to Figure Out	3	3.95	7	7.22	3	4.84	13	5.53
Total Tally		76	100.00	97	100.00	62	100.00	235	100.00

Table 4: Summary of FCT Strategies

All FCT Strategies		Spanish	Spanish Percent	French	French Percent	German	German Percent	Total	Percent of Total Responses
1	Context Helpful	17	20.73	29	23.02	23	25.00	69	23.00
2	Context Did Not Help	1	1.22	3	2.38	0	0.00	4	1.33
3	No Need for Context	14	17.07	12	9.52	13	14.13	39	13.00
4	Guessing	1	1.22	0	0.00	2	2.17	3	1.00
5	Exact Meaning in English	10	12.20	14	11.11	14	15.22	38	12.67
6	Sounds / Seems / Looks Like	0	0.00	9	7.14	0	0.00	9	3.00
7	No Idea What Idiom Means	1	1.22	1	0.79	0	0.00	2	0.67
8	Connecting to Other Idioms	28	34.15	33	26.19	28	30.43	89	29.67
9	Unable to Connect to English	3	3.66	9	7.14	1	1.09	13	4.33
10	Unable to Figure Out	1	1.22	1	0.79	0	0.00	2	0.67
11	Translation	4	4.88	9	7.14	10	10.87	23	7.67
12	Lack of Vocabulary	0	0.00	1	0.79	1	1.09	2	0.67
13	Graphophonics / Arrangement	0	0.00	0	0.00	0	0.00	0	0.00
14	Previous Experience	0	0.00	0	0.00	0	0.00	0	0.00
15	Frustrated / Confused / Annoyed	0	0.00	0	0.00	0	0.00	0	0.00
16	Personalizing Situation	2	2.44	2	1.59	0	0.00	4	1.33
17	Strategy	0	0.00	3	2.38	0	0.00	3	1.00
Total Tally		82	100.00	126	100.00	92	100.00	300	100.00

Figure 5: Summary of ZCT Strategies

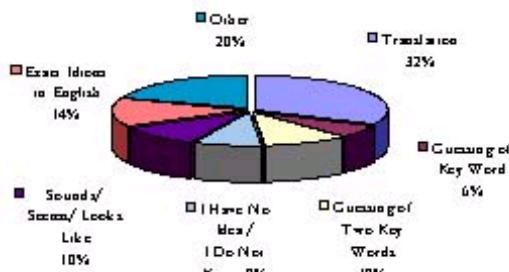
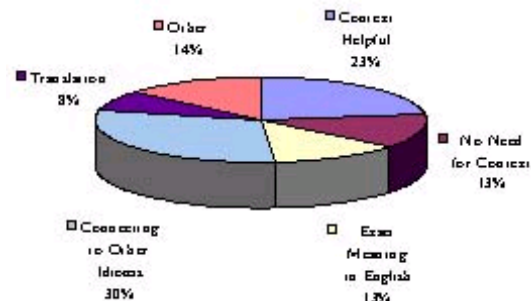


Figure 6: Summary of FCT Strategies



While no claim of completeness is made here, the participants' introspections during reading alouds (i.e., assessment of the reading process and integration of text during reading as it is occurring) and follow up retrospections (i.e., verbalization of contextual understanding at the sentence and text level) clearly indicate that in the ZCT they used translation (31.91 percent) and guessing (19.14 percent) as their two main strategies in interpreting a given VP idiom. Combined, these two strategies alone account for more than fifty percent of all mental activity observed in this task. Guessing, however, did not appear to work well with PLL idioms. Often, participants tried to manipulate the literal meaning of the entire target language (TL) idiom, attempting to make some associations and connections with native language (NL) idioms that might have some commonalities. At other times, they were misled by the syntactic and semantic nature of an VP idiom, which more often than not misled them. This was clearly observable, for example, with the German PLL idiom *jemanden*

auf den Arm nehmen [(lit.) to take someone up on one's arm, (fig.) to pull one's leg]. Both German participants, willing to bet the farm on the accuracy of their interpretation, said that this idiom clearly means *to take someone by the hand, to help someone*. Still, at other times, they would make a guess only to go back a few seconds later and abandon, modify, or reformulate a new guess entirely. This behavior was less visible with SLL idioms and still less with LL idioms, thus further validating the claim that even in the absence of context LL idioms are the easiest to process and interpret, followed by SLL and PLL idioms.

Similar observations were also available for analysis in the FCT reading behavior of these seven participants. Again, it was during the retelling of the texts that their existing linguistic and conceptual schemata were transformed. It is worth noting here that texts containing LL or SLL idioms were read much faster and less completely (i.e., entire sentences and sections were skipped altogether) than texts containing PLL idioms. With few exceptions, the majority of the LL and SLL texts were only scanned for evidence in the input that confirmed previously constructed hypotheses. In contrast, PLL texts took them considerably longer to read and interpret. This notable change in reading behavior within idiom type may be largely due to the fact that participants were more concerned with encoding the meaning of PLL idioms than they were with LL or SLL idioms. Nearly all of them expressed the desire to "get to that one idiom that had something to do with..." As one German participant (referring to PLL idioms No. 9, 12, and 15) phrased it: "There are three of them [idioms] that I want to spend some time on. I want to know what they mean."

Often participants would lean forward, their hands held over their eyes or the sides of the head, zooming in on the computer screen to be sure they were not missing anything. At times, they would read a specific line repeatedly, followed by small periods of silence before moving on to the next line, as if to double-check the validity of old hypotheses or to replace and reconstruct new ones through the contextual cues available in the idiomatic text. At other times, they would skip entire passages and zoom in on the sentence surrounding the PLL idiom. Often they would go back two or three sentences and reread entire passages before venturing forward to the idiom in the text, often smiling at places where they made the right connections. In some instances, frustration would build as they found themselves unable to decode certain vocabulary items or connect TL idiom with an equivalent NL idiom. In others, they would hit the table in frustration with their hands or lean backwards as if to win some distance between them and the object that causes them so much frustration, their eyes glued to the ceiling, playing a nervous game of intensity, wondering what the particular idiomatic phrase could possibly mean in this context. Sporadic glimpses of Eureka exclamations would follow but not always, upon which they would reread the entire text even more intensely prior to uttering a final English equivalent idiom. Moreover, they would use a number of idioms in their reflections and, more often than not, they were not even aware of doing so until informed by the researcher. Oftentimes, they would come close to the idiomatic meaning without being able to exactly articulate an English equivalent. Requesting the answer on the computer program often resulted in comments of disbelief such as "Oh, man! I can't believe it. I knew it!" or "I should have gotten this one. It is so obvious!"

The answers suggested by the participants' (meta)cognitive accounts in the two tasks further support the finding that VP idioms were understood more readily within the FCT than within the ZCT. In this task, participants made use of bottom-up (local text inferences) and top-down (global text inferences) processing, since the idiomatic expressions, especially those of the PLL type, induced them to guess, hypothesize, solve the problem of the *Conceptual-Semantic Image* (CSI) distance (i.e., the degree of opacity) between target and domain idioms, and predict the right meaning mappings between the L2 and L1 idioms. It is therefore not surprising either that those SLL and PLL idioms missed in the ZCT were for the most part correctly interpreted when given within a text that supported their meaning, or that participants were willing to reconsider their initial answer after rereading the text, leading to a new interpretation. More often than not the context guided participants to build a new entry in their mental lexicon.

Thus, there is compelling evidence to support the notion that participants access first their lexical system and second their cognitive system, where the decision is made, and, furthermore, that context exerts a strong influence on the decision part of this interpretative process. It can be concluded then that context facilitates and strengthens guessing and access to the overall meaning

of the text passage and the idiom in particular. This may be attributable to the notion that we hold on only to the contextual relevant cues.

Participants were also found to apply "preconceived notions" about the meaning of a particular idiom based on the interpretation of the lexical items present in a VP idiom. This expanded mental effort determined to a large extent the accuracy level of those SLL and PLL idioms. As already discussed, "guessing" may also result in erroneous guesses, yet guessing in context is, strictly speaking, a reading strategy, and its use involves a combined semantic and pragmatic treatment of the input. It is interesting to note here that with the introduction of context, the combined use of guessing and translation decreased by 42.38 percent as can be seen clearly in the summary of FCT strategies presented in [Table 4](#).

In many ways, these participants responded to the texts in similar ways: they struggled with lack of vocabulary and expressed the firm opinion that very often there was no need for context since they already knew from the previous ZCT the meaning of the LL or SLL idiom. They also had at times difficulties bridging the gap between target and domain PLL idiom, although it was clear from their discussion of the text that they fully understood the meaning of the text as well as the communicative intent of the idiom. The information obtained through TIA provides clear evidence for the presence of transitional stages of idiom comprehension and interpretation; that is, computation of idiomatic meaning is ongoing, complex, dynamic, and transactive in nature, leading to hypothesis construction and testing.

It appears from the above TIA that successful VP idiom understanding during contextualized reading depends on the presence of a number of factors: learners must attend to idioms, and clear cues to their meanings and relationships must be present. Other text features, such as redundant presentation of words and the learners' previous background and cultural knowledge, also play a role. It must also be said that the conceptualization of an idiom's meaning is complex, dynamic, and interactive in nature. The interpretation of a VP idiom within its particular context leads to reprocessing (i.e., self-correction), and so former idiom schemata were at times abandoned, modified, or reformed as final interpretation of idioms was corrected. In short: they were transformed and transacted in context. This was clearly evident in the FCT observations of the participants.

While it is clear that the individual CMIV language groups would have benefited from a larger sample, it must also be noted, that the sole purpose of the group's data in the overall interpretation of Liontas' (1999) study was to enhance understanding of the reading process by investigating the on-line reading and idiom understanding behavior of L2 learners. Their on-line and off-line reading behavior and performance thus deserve serious consideration in the design of future research studies seeking more definitive answers. A summary of all findings revealed in this study through the use of TIA is presented in Table 5.

Table 5: Summary of TIA Findings

ZCT	FCT
<ul style="list-style-type: none"> • Performance on VP idioms presented without context is directly linked to the degree of difficulty associated with the CSI distance of idiom type. • Comprehension and interpretation of context-free VP idioms is both highly systematic and universal. • Processing and computation of idiomatic meaning becomes more laborious and slow as one moves from LL through SLL to PLL idioms. • In the absence of context, LL idioms are processed much faster and with greater ease than SLL idioms which, in turn, are processed faster and with greater ease than PLL idioms (i.e., $LL > SLL > PLL$ or $LL > PLL$). • Recognition of individual lexemes within the VP phrasal unit does not constitute accurate idiom understanding. 	<ul style="list-style-type: none"> • VP idiom understanding is context-induced, thus restricting the number of hypotheses that can be seriously entertained at any given time. Confirmation of hypotheses constructed earlier or replacement and reconstruction of new hypotheses follows. • Context affects notably understanding of VP idioms. This effect is most pronounced within the PLL category of VP idioms. • PLL idioms underperform LL and SLL idioms (even in context). • The pattern of idiom performance success is both systematic and universal within VP idiom types and across second languages. • <i>Transactional Idioms Analysis</i> (TIA) can yield powerful insights into the meaning-creation process of VP idiom understanding during reading.

In sum, the pedagogical implications of TIA provide second and foreign language instructors with a theoretical construct that they could easily adopt to frame their observations of reading and idiom understanding (i.e., the combined comprehension and interpretation process of idioms). The development of the meaning-making transaction of VP idioms must therefore be text-situated and context-based so that participant observation can become a truly informed, inductive inquiry. TIA sessions, when used judiciously and with care, have the potential to create successful language learning environments where learners themselves discover the reading strategies they use while learning how to communicate and negotiate idiomatic meaning of VP idioms beyond their native language and culture. Not only does TIA allow L2 learners the opportunity to observe themselves in the reading process (especially if such sessions are audiotaped or videotaped), but it also gives them the rare opportunity to respond to the literature as they read. Learners' development of metalinguistic awareness, especially when coupled with written or oral reflections about cultural reading experiences, allows them to think critically about language and through language by questioning the very aspects of reading in another language.

Conclusion

This article began with a historical overview of reading research, discussing the reading models that were posited in the professional literature during the twentieth century. The three major reading models of this era - *bottom-up*, *top-down*, and *interactive processing models* - put forth by researchers regarding the nature of reading and reading comprehension were then presented. The potential applicability of any of these models to L2 contexts led to the discussion of the nature of reading; K. Goodman's *transactional socio-psycholinguistic theory of reading* was then expanded to account for the transaction and meaning creation of VP idioms in second languages, which, as discussed, requires the use of a *pragmatic cycle*.

The finding that L2 learners have difficulties making sense of idioms even after they have comprehended successfully the semantic meaning of the individual words (Liontas, 1997, 1999, 2001; Arnaud and Savignon, 1997) attests to the necessity of adding such a cycle - a *pragmatic* cycle - to account for the reading process that L2 readers have to undergo in order to construct the appropriate cultural meaning of an idiom that is more than the sum of its constituent parts.

This cycle is best understood within a *Transactional Idiom Analysis* (TIA) framework which, it was argued, provides invaluable insights into the reading process, reading comprehension, and the reading strategies - both top-down (text-level) and bottom-up (word-level) strategies - and textual cues L2 readers employ when confronted with VP idioms in authentic reading texts. Specific recommendations for the advancement of this framework were also discussed. It was concluded that for participant observation to become a truly informed, inductive inquiry, the study of VP idioms must be text-situated and context-based.

It is argued that the advancement of a new theoretical model for L2 readers dealing with idiomatic expressions, including the propositions advocated within the TIA framework suggested here, require the elicitation of multiple sources of information which, when integrated into a coherent whole, can yield powerful insights into the meaning-creation process of comprehending and interpreting VP idioms during reading. This process is not the single result of the act of reading *per se*, but invariably includes the interaction of top-down and bottom-up processes along with many other reader and text characteristics. In short: reading processes are neither generic and linear but complex and variable.

In closing, making idiomatic learning a conscious process via awareness-raising activities is the first step toward successfully meeting the challenges of reading; that is, making sense of the printed world around us (Ericson and Simon, 1984, 1987; Lee, 1986; Olson et al., 1984; Rikard and Langley, 1995; Trabasso and Suh, 1993; Trabasso and Magliano, 1996; Whitney and Budd, 1996). An additional, but very important step is to offer learners specific learning strategies that help them develop their own idiom awareness and retention strategies. When coupled with other mnemonic devices, metalinguistic knowledge, and lexicological / discourse facts, TIA thus significantly help L2 learners cope with such linguistic puzzles as idioms. The theoretical account of the *Transactional Idiom Analysis* presented in this article foreshadows some of the implications and consequences TIA has for research in general and how learners of second and foreign languages can participate in and reflect on their own idiomatic development in particular.

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