Language Learning Strategies: 
Crucial Issues of Concept and Classification

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PURPOSE

The dual purpose of this article is:

1. to note seven key problems in language learning strategy concepts and classification systems as they relate to empirical research in the area of second and foreign language development; and
2. to suggest ways to resolve these problems and thereby increase unity, coherence, and meaningfulness of language learning strategy research.

This article is not intended as a comprehensive review of language learning strategy studies; for such reviews, see Oxford (1992/1993), Oxford and Crookall (1989), Skehan (1989), and O’Malley and Chamot (1990). The goal is instead to highlight the key conceptual and classificatory problems in the language learning strategy research area and to recommend solutions.

DEFINITION AND SCOPE

Language learning strategies are defined as steps or actions taken by learners to improve the development of their language skills. These strategies have the power to:

(a) increase attention essential for learning a language;
(b) enhance rehearsal that allows linkages to be strongly forged;
(c) improve the encoding and integration of language material, and
(d) increase retrieval of information when needed for use (Oxford, 1990b; Mayer, 1988).
Language learning strategies affect "the way in which the learner selects, acquires, organizes, or integrates new knowledge" (Weinstein & Mayer, 1986, p. 315).

However, language learning strategies do not just deal with the cognitive domain. Strategy use is also intended to "affect the learner's motivational or affective state" (Weinstein & Mayer, p. 315). In addition to the cognitive aspects of language learning, language learning strategies involve social (interpersonal, interactional), affective (emotional, motivational, attitudinal, and personality-related), and metacognitive (planning and evaluation-related) aspects.

Language learning strategies are relevant at any point on the "learning-and-acquisition continuum" described by Brown (1987). That is, these strategies are used in formal classroom situations where language is presented systematically, as well as in less formal environments where language is picked up naturally without intentional instruction.

QUICK SUMMARY OF RESEARCH ON LANGUAGE LEARNING STRATEGIES

During the last two decades, language learning strategy research has burgeoned. Researchers have shown that successful learners tend to apply strategies in an orchestrated way relevant to their own needs and the characteristics of the task (see, e.g., Cohen, 1990; O'Malley & Chamot, 1990; Oxford, 1990a, 1990b, 1992/1993; Vann & Abraham, 1989; Wenden, 1991; Wenden & Rubin, 1987). According to some researchers, less successful language learners sometimes do not even know what strategies they use, or they are aware of just a few noncommunicative and mundane strategies, such as translation, rote memorization, and repetition (Nyikos, 1987). Yet sometimes less effective learners are indeed aware of using a wide range of strategies, but they employ these strategies in a random, almost desperate manner, not keyed to the task at hand (Vann & Abraham, 1989).

Strategy training studies in the foreign and second language fields have frequently been successful but not consistently so (Cohen, 1990; Chamot & Kupper, 1989; O'Malley & Chamot, 1990; Tang, 1990). Careful observation shows that methodological problems—too short a period for strategy training, too easy or too difficult a task, lack of integration of strategy training into regular class activities, lack of perceived relevance of strategy training, and inadequate pretraining assessment of learner's needs—might have obscured potentially important findings in some cases.

CONCEPTUAL AND CLASSIFICATORY PROBLEMS TO BE SOLVED

From the profusion of studies devoted to language learning strategies, recently summarized by Oxford (1992/1993), one might believe that this research area is fully coherent. However, this coherence is something of an illusion. Seven serious conceptual and classificatory problems exist in the language learning strategy research field. These problems do not cancel the significance of research findings in this realm, but they do underscore an urgent need to clarify assumptions about categorizations as soon as possible, so that future research can be more sound.

Problems in the language learning strategy research area include the following:

1. Distinctions between "strategy" and "tactics" are unclear or nonexistent.
2. Researchers often disagree about whether learning strategies are conscious or unconscious.
3. Many different criteria are used for classifying language learning strategies—the "moving target" syndrome.
4. Researchers argue about learner strategies vs. learning strategies—or what contributes to learning a language.
5. The concept of "strategic competence" in the well-known communicative competence framework is too narrow.
6. Many studies fail to show the conceptual link between language learning strategies on the one hand and learning styles, other personality-related variables, and demographic factors on the other.
7. So far, it is impossible to discern appropriate language learning strategy classifications for natural settings or technology-assisted instruction.

Each of these problems is discussed below, along with potential solutions.
Problem 1: Distinctions between Strategy and Tactics
Are Unclear or Nonexistent

The word strategy comes from the ancient Greek word strategia, meaning generalship or the art of war. Today the military meaning of strategy involves the optimal management of troops, ships, or aircraft in a planned campaign. Strategy is "the conduct of conflict . . . the set of policies used for the conduct of conflict . . . the policy tool for planning aggression against opponents . . . the organized deployment of resources to achieve specific objectives against competition from rival organizations" (James, 1984, p. 12).

Another important word is tactics. This plural noun emerged from the Greek verb tasso (to arrange). It refers to the art "of disposing military or naval or air forces, especially in actual contact with (the) enemy . . . (a) procedure calculated to gain some end, by skillful devices" (Powler & Fowler, 1977). Thus, in military parlance strategy is a broader concept than tactics, although both concepts involve a goal- or problem-orientation, a sense of conflict, a set of actions, and some degree of conscious intentionality.

Von Clausewitz, the military strategist, made clear the distinction between tactics and strategy: "Tactics is the art of using troops in battle: strategy is the art of using battles to win wars" (James, 1984, p. 15). To translate Von Clausewitz's distinction into language learning terms, we might say that

learning tactics represent the short-term art of using specific behaviors or devices (such as simplifying, inferencing, categorizing, asking for verification, creating personal examples, using positive self-talk, relaxing with music, setting goals, deciding to avoid distractions, arranging for conversation partners, and staying in a conversation through mimic) to support one or more major learning strategies during day-to-day learning situations. Learning strategy is the long-range art of learning more easily and effectively by using major clusters of behaviors for forming concepts and hypotheses, testing hypotheses, personalizing linkages, embedding material in long-term memory, understanding one's affective state, managing the learning process, and producing language while lacking adequate linguistic knowledge.

Notice that in language learning, the strategy-and-tactics duo has shed its conflictual, warlike features but has retained the other

characteristics: active, conscious movement toward a goal. See Dunkin and Biddle (1974) for a discussion of strategy and tactics in education.

Schmeck's Strategy-Tactic Distinction

The distinction between strategy and tactics has been maintained by educational psychologists such as Schmeck (1988). Schmeck considers strategy to be "a general approach or plan of the learner," as well as "a higher-level cluster of learning tactics that work together to produce a uniform learning outcome." His examples of strategies include conceptualizing, personalizing, and memorizing. To Schmeck, a tactic is "a specific activity of the learner," an observable operationalization of a broader strategy. For instance the conceptualizing strategy can include tactics such as categorizing, comparing, contrasting, hierarchically organizing, abstracting, and networking ideas. The personalizing strategy can encompass tactics like self-referencing, generating examples, translating into personal language and images, and linking new information with prior personal experience. The memorizing strategy is operationalized through tactics such as repetitive rehearsing of information, using mnemonics, and encoding verbatim. (Schmeck feels that the memorizing strategy is a weak one when compared with the conceptualizing and personalizing strategies and that the memorizing strategy, unlike the other two, is associated with neurotic or insecure personality features. We believe that the memory strategy is not a neurotic manifestation but a sometimes sensible, if rather limited, behavior used in early stages of language learning for coping with large amounts of vocabulary to be learned.)

Seliger, Faerch and Kasper, and Marton on Strategies and Tactics for Language Learning

Seliger (1982) poses the distinction between strategies and tactics for language learning. To Seliger, strategies are sets of biologically determined, constant, abstract cognitive functions used to acquire knowledge; three kinds of strategies for language acquisition exist, according to Seliger: hypothesis testing, simplification, and generalization. In contrast, tactics are lower-level activities carried out in response to the immediate, local context of language acquisition. Similarly, Faerch and Kasper (1980) define strategies as plans for controlling the order in which a sequence of operations is to be performed. Process, according to Faerch and Kasper, consists of the operations (tactics) themselves.

Marton (1983) agrees in principle with Seliger's distinction between strategies and tactics, but reduces Seliger's three types of
strategies to one, hypotheses testing, and subsumes the other two—
simplification and generalization—under it. Marton adds that "where
tactics activate underlying basic strategies they will lead to successful
long-term acquisition," but when the learner's filter or the learning
environment "prevents a given tactic from triggering basic strategies,
only language-like behavior or short-term acquisition can take place" (p.
314). Thus, strategies and tactics must support each other for the most
effective long-term language development.

Later Seliger (in Larsen-Freeman & Long, 1991) adds to the
strategy-tactic split by positing a new distinction between macro-tactics
and micro-tactics. Macro-tactics, according to Seliger, result in
situations where learners can obtain data (and may be similar to Rubin's
1981 "indirect strategies"), whereas micro-strategies provide direct
input for learning (and may be related to Rubin's category of "direct
strategies").

Where Strategies and Tactics Become Confused

Mayer (1988) unintentionally provides an excellent example of
the confusion between strategies and tactics. He lists the following as
learning strategies: underlining key ideas, outlining, and putting ideas
into ones own words. These behaviors would seem to be tactics that
operationlize broader strategies. The first two might reflect a strategy
like conceptualizing or finding the central meaning, and the last might
reflect a personalizing strategy.

Oxford's (1990b) language learning strategy list contains a
number of strategies that, in retrospect, might much more accurately be
termed tactics, such as analyzing expressions, looking for conversation
partners, and using relaxation techniques to improve concentration and
retention.

Too Many Fuzzy "Synonyms"

Larsen-Freeman and Long's (1991) landmark book on second
language acquisition research reflects the confusion by appearing to
equate learning strategies with all of the following: learning behaviors,
cognitive processes, and tactics (p. 199). Wenden (1987, 1991) notes that
these terms are all used synonymously: learning strategies, techniques,
potentially conscious plans, consciously employed operations, learning
skills, cognitive abilities, processing skills, problem-solving procedures,
and basic skills. Oxford (1990b) adds that learning strategies are also
equated with thinking skills, thinking frames, reasoning skills, tactics,
and learning-to-learn skills.

What's Wrong with Equating Strategies and Tactics?

Most of our interventions in learning strategies training
programs are actually at the specific level of tactics, and
we often fail to give sufficient attention to whether or not
the tactics that we teach fit together to produce a coherent
learning outcome (Schmeck, 1988, p. 173).

Thus, strategy training often focuses on small behaviors that may or
may not be congruent or effective for improving learning.

Another problem in equating strategies and tactics is that doing
so produces strategy lists that are overly long, atheoretical, and filled
with mixed levels of behavior (some broad, like elaboration and
inferencing, and some narrow, like taking notes and summarizing).
"Hypertaxonomizing" then becomes a peril, as reflected in some of the
work of Oxford (1990b) and others.

Solution to the Problem

Identifying broad strategies and distinguishing them from tactics
would simplify our understanding of language learning strategies
significantly. Language learning strategy researchers are advised to
develop and agree upon a smaller number of broad strategies with their
related tactics listed underneath each strategy. In this way, greater
conceptual clarity would be obtained and O'Malley, Chamot, Stewner-
Manzanares, Russo, and Kupper's (1985a) complaint about confusion in
hierarchic relationships among strategies would be significantly
reduced in intensity. Table 1 offers a possible outline of strategies and
tactics for language learning. This table will be referred to throughout
the article.

TABLE 1
A Possible Organization of Language Learning Strategies and Their
Supporting Tactics Useful for All Four Language Skills

| Strategy = forming concepts and hypotheses (building declarative knowledge). |
| Tactics = simplifying through transfer, simplifying through overgeneralization; using inferencing to figure out the meaning in the absence of adequate vocabulary and grammar; categorizing, comparing, contrasting, hierarchically organizing, analyzing, reasoning deductively, abstracting, creating networks, propositions, and schemata (conceptual frameworks). (See Faerch & |
O'Malley & Chamot, 1990; Oxford, 1990b). This group contains tactics that have often been called until now metacognitive strategies.

7. **Strategy = producing oral or written language while lacking adequate linguistic knowledge.**
   Tactics = communicative achievement tactics such as gesturing, miming, paraphrasing, literally translating, substituting, restructuring, approximating the message, coining words, switching to the native tongue, waiting for the item to come to mind; and communicative reduction tactics such as avoiding use of certain rules, speech acts, and functions. (See Tarone, 1980, 1981; Ellis, 1986; Oxford, 1990b.) Most of these strategies can be used for both writing and speaking. This group contains tactics that have often been called until now compensatory strategies or communication strategies.

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**Assumption #1**

Strategy use involves some degree of conscious awareness on the part of the learner. When a behavior is used unconsciously (e.g., production behaviors described by Ellis, 1986, for automatizing the learner's existing linguistic knowledge through initial simplification, later complexification and self-checking), it is not a strategy because conscious awareness is not present, according to our definition of strategy.

**Assumption #2**

All of the strategies and tactics above contribute to learning, either directly or indirectly. For example, Tarone (1980) and Littlewood (1979) show that Strategy 7 enhances learning indirectly. Therefore, it is artificial to bracket off “learner strategies” (such as communication strategies) from “learning strategies,” as some researchers have done.

**Assumption #3**

Although strategies are sometimes categorized as procedural knowledge, i.e., knowledge of procedures (O'Malley & Chamot, 1990, p. 231, after Anderson, 1980; Pressley et al., 1990), nevertheless, strategies are frequently used to create declarative knowledge, i.e., knowledge of facts, concepts, and relationships. Learning strategies can aid learners in making initial links between new material and stored information, strengthening existing links, and retrieving information through declarative networks when needed (Mayer, 1988).
Problem 2: Researchers Disagree about Whether Learning Strategies Are Conscious or Unconscious

In the learning strategy area, there are clearly distinct points of view about conscious awareness as an inherent feature of strategies. One group of researchers states that consciousness is an essential characteristic of strategies, and another group disagrees.

Consciousness as an Essential Feature of Strategies

The ancient Greek definition and most modern uses of the term "strategy" imply consciousness and intentionality. Weinstein and Mayer (1986) state that learning strategies must be intentional and hence conscious on the part of the learner, because learning strategies have a goal: facilitation of learning. Likewise, Rabinowitz and Chi (1987) suggest that strategies must be conscious; if they are performed automatically, they are no longer strategies. Chamot (1987b) asserts, "Learning strategies are intentional on the part of the learner" (although O'Malley and Chamot's 1990 book weakens that assertion, as shown below). Bialystok (1990) notes that all definitions of strategies involve problematicity, consciousness, and intentionality, although a contradiction appears (see below).

The conscious awareness involved in strategy use is highlighted by Miller, Galanter, and Pribram (1960) in their well-known book Plans and the Structure of Behavior. These researchers show that plans—equivalent to learning strategies—are largely based on a match or mismatch between the stimulus (incoming information) and the learner's stored information structure (known as a schema, or a configuration of interrelated features that define a concept). When incoming information does not agree with stored information, the learner responds by initiating plans of action to restructure the old information (similar to Piaget's [1952] operation of "accommodation"). When incoming information does agree with stored information, the learner does not have to restructure the old information, but instead simply expands the existing schemata to encompass the new information (similar to Piaget's operation of "assimilation"). The learner's plans (strategies) are intended to achieve conceptual coherence and self-control. These plans specify the sequence and organization of behavior patterns, the behaviors that are appropriate under particular conditions, the standards which must be achieved, and the consequences of reaching or falling short of these goals (Mischel & Mischel, 1977). Thus, according to Miller, Galanter, and Pribram, behavior shows meaningful action toward goals; strategies or plans are conscious units in the psychological structure of behavior.

In his book on language learning, Cohen (1990) defines strategies as learning behaviors which are consciously selected by the learner. He considers the element of conscious choice important because in his view it gives a strategy its special character. Thus, strategies are moves which the learner is at least partially aware of, even if full attention is not being given to them. There must be some level of awareness that a strategy is being used. If a learner's behavior is totally unconscious, then it would simply be referred to as a process, not a strategy. For example, a learner may use the behavior of skimming a portion of text in order to avoid a lengthy illustration. If the learner is at all conscious of why the skip is taking place, then it would be a strategy. Otherwise, it would just be seen as an unconscious process.

Consciousness as a Non-Essential Feature of Strategies

On the other side of the fence stand those who assert that a strategy need not involve consciousness or awareness on the part of the learner. As we have seen above, Bialystok (1990) notes that all definitions of strategies involve consciousness and intentionality; however, she seems to contradict these definitions by suggesting that strategies cannot have consciousness as a criterion: "There is no means of distinguishing plans that lead to strategic speech from those that do not by virtue of consciousness" (p. 5).

Similarly, O'Malley and Chamot (1990), who strongly emphasize Weinstein and Mayer's statements about learning strategies being intentional and thus conscious (p. 43), nevertheless state that use of language learning strategies is part of procedural knowledge, which—though it might start out as conscious—is characterized chiefly by automaticity and lack of conscious awareness (pp. 52, 231). "Procedural knowledge includes mental activities such as problem solving, language reception and production, and using learning strategies... Production systems [are] the processes by which procedural knowledge is stored in long-term memory... and, once learned, will tend to be executed rapidly and without awareness" (p. 231, italics added). Thus, O'Malley and Chamot underscore the strong possibility that language learning strategies can be unconsciously performed.

One researcher suggests that some language learning strategies involve conscious/behavioral processes and other language learning strategies involve unconscious/psycholinguistic processes (Tarone, 1980). The borderline between conscious and unconscious is not always clear, however.

Some researchers use the term "potentially conscious" to refer to language learning strategies (Paerch & Kasper, 1980; Wenden & Rubin, 1987). This term implies that language learning strategies might be, in some instances, unconscious as well. Yet there is little clarity about
what makes a strategy conscious in some instances and unconscious in others for that same learner or different learners.

There is even less clarity about whether strategy use moves from consciousness to unconsciousness (or vice versa). One could assert that the aim should be to heighten the conscious awareness of strategy use by language learners; on the other hand, one could also assert that the aim should be to make language learning strategy use so natural and practiced that it becomes fully automatic and unconscious.

A Related Issue: Strategy Consciousness versus Language Input Consciousness

The concern for consciousness about the use of language learning strategies is sometimes confused with more general consciousness about second or foreign language learning. There is currently a concern for having language learners become more aware of the language material they might wish to learn. Ellis (1990), for example, sees consciousness-raising as a legitimate goal of form-focused instruction—i.e., as a means to the attainment of grammatical competence. Schmidt (1990) asserts that “noticing” is the necessary and sufficient condition for converting input to intake. He goes on to suggest that “paying attention” is probably facilitative in language learning and may be necessary for adult learners if they wish to acquire grammatical features. Scovel (1991) emphasizes attention as “central to the entire process of second language acquisition” and as “the neuropsychological mechanism that promotes or prohibits acquisition” (pp. 3, 5). These kinds of conscious attention refer to paying attention to the language material and are different from being aware of using language learning strategies—although both consciousness of the language material and consciousness of strategy use are beneficial. The issue of “potential consciousness” that is found in discussions of students’ awareness of learning strategies does not appear full force in discussions of students’ awareness of language material.

Solution to the Problem

It is important to take a stand on whether language learning strategies are conscious or unconscious. We assert that language learning strategies are indeed conscious behaviors undertaken to improve language learning. If strategies are unconsciously and automatically used, then explicit strategy training makes little or no sense. Research shows that strategy training, when conducted well, can improve students’ strategy use by making learners more fully conscious of their current behaviors and by bringing to consciousness additional strategy options for learners to practice and adopt if useful (Cohen, 1990; Oxford & Crookall, 1989).

Empirical research on language learning strategies (Green, 1991) provides some justification for making consciousness an essential criterion for these strategies. Green reports that his advanced language learners often have significantly lower strategy use than intermediate language learners, and that intermediates use strategies significantly more than do beginners. Thus, strategy use in Green’s study might appear to be curvilinear, with intermediates using language learning strategies far more than advanced and beginning language learners. One might speculate that advanced learners might have automatized their learning behaviors, so they might not use or need language learning strategies as much as do intermediates; and beginners might not have yet developed a large, conscious, and frequently tapped repertoire of strategies. For clarity’s sake, it seems useful to call conscious learning behaviors strategies but to avoid using that term for automatized, unconscious learning behaviors.

Teachers and students must keep in mind differences between (a) the learner’s consciousness of strategy use and (b) the learner’s awareness of language material to be learned. When one talks about strategy awareness, one is referring to the learner’s understanding of his or her own strategy applications—how he or she takes in new language material, encodes it, and transforms it to make it usable for actual communication. When one discusses general language consciousness, one is referring to the learner’s awareness of language input. Yet there might be a link between these two concepts. Paying attention to language input may involve the conscious use of language learning strategies, such as strategies for attending to input, strategies for determining the purpose of input, and strategies for linking input with existing knowledge. Therefore, raising awareness about the language material might also enhance awareness about the use of language learning strategies.

Problem 3: Many Different Criteria Are Used for Classifying Language Learning Strategies—the “Moving Target” Syndrome

Many contrasting criteria are employed for categorizing language learning strategies by the same or different investigators. This creates a “moving target” syndrome in which a given behavior appears to dart from one category to another, depending on the inclinations or epistemological understanding of the researchers. Some of the main criteria for categorizing language learning strategies are shown below. Note that a great deal of overlap exists in the sets of criteria. The main thrust(s) of a given strategy classification system are highlighted.
Finally, many of the behaviors that are viewed below as strategies might more aptly be called tactics, as explained earlier in this paper.

1. Strategies used by successful language learners

   This is a criterion that has been adopted by Naiman, Frohlich, and Todesco (1975); Rubin (1975, 1981, 1987); and Stern (1975, 1983). (The opposite criterion, strategies used by unsuccessful language learners, has been employed as a classifier by Vann & Abraham, 1989). A variety of language learning strategies (and some tactics), as well as a range of personality variables that are not really behaviors, is included in these systems.

2. Cognitive (intellectual) and metacognitive (planning-organizing-evaluating) functions

   The many related but not identical language learning strategy taxonomies of O'Malley, Chamot, and their research group (e.g., Chamot & Kupper, 1989; Chamot & O'Malley, 1987; O'Malley & Chamot, 1990; O'Malley, Chamot, Stewner-Manzanares, Kupper, & Russo, 1985a; O'Malley, Chamot, Stewner-Manzanares, Russo, & Kupper, 1985b) have concentrated on cognitive and metacognitive functions. These taxonomies have only very lightly touched the surface of social strategies and especially affective strategies, the latter of which "are of less interest in an analysis such as ours which attempts to portray strategies in a cognitive theory" (O'Malley & Chamot, 1990, p. 44). Some broad strategies, such as elaboration, are mixed in with what we view as tactics, such as outlining.

3. Declarative and procedural knowledge

   The cognitive information-processing, declarative-procedural metaphor of cognition by Anderson (1980; see also Sternberg, 1990, for a comparison with other current "metaphors of mind") was adopted by O'Malley and Chamot (1990) and by Faerch and Kasper (1983). Declarative knowledge relates to facts, ideas, propositions, networks, concepts, whereas procedural knowledge relates to procedures like using learning strategies. This computer-based metaphor leaves out almost all affective aspects of language learning. The strategy systems of O'Malley and Chamot as well as Faerch and Kasper are quite different, despite their use of the declarative-procedural contrast. No distinction is made between strategy and tactic by O'Malley and

Chamot, although Faerch and Kasper distinguish between strategy and operation (which seems like tactic).

4. Directness or indirectness

   Rubin (1981, 1987) identifies language learning strategies that purportedly contribute directly to language learning (direct strategies, such as cognitive and metacognitive strategies) and those that contribute indirectly to language learning (indirect strategies, such as social strategies and communication strategies). The means for discerning the directness or indirectness were not fully clear. Oxford (1990b) uses the direct-indirect split in a different way, with directness or indirectness relating to whether the target language itself is directly or indirectly involved in the use of a given strategy. The strategy-tactic split is not involved in these frameworks.

5. Whole-person characteristics

   On the assumption that the learner is a multifaceted human being, not just a cognitive-metacognitive information-processor, Oxford (1985, 1990a, 1990b) has created a series of strategy systems that focus on a wide range of features, with the most recent system including large numbers of strategies (some more rightly viewed as tactics) in each of six categories: memory-related, cognitive-processing, compensatory, metacognitive, affective, and social.

6. Strategies versus tactics for cognition

   Seliger (1983) and Marton (1983) distinguish between broad strategies (e.g., hypothesis-testing) and smaller tactics with a focus on cognitive behavior in language learning. They avoid any discussion of affective, social, and metacognitive aspects. They present some of the few language learning systems that clearly divide learning behaviors into strategies and tactics.

7. Explicitness and type of knowledge

   Bialystok (1978) and Ellis (1990) have developed strategy frameworks based on the degree of explicitness (or implicitness) of knowledge and the kind of knowledge (e.g., linguistic or world knowledge; form-focused and meaning-focused knowledge). Language learning strategies are then related to these factors.
8. Communication strategies
Tarone (1977, 1981, 1983), Faerch and Kasper (1983), and Ellis (1986) have paid attention to strategies (often really tactics) that compensate for inadequate linguistic knowledge in a speaking situation. Tarone and Yule (1989) have expanded this concept to include compensatory behaviors in a listening situation. Though these are not often called "learning strategies," Tarone (1981, 1983) makes it clear that learning can and does take place when they are used. (Note: Production/reception strategies are employed for using the learner's existing linguistic knowledge automatically, according to Faerch and Kasper (1983), and are not seen as learning strategies; see Ellis, 1986.) Sometimes these communication strategies are called compensatory strategies (see Ellis, 1986; Kellerman, 1991; Littlewood, 1984; Oxford, 1990b; Poulisse, Bongaerts, & Kellerman, 1984; Poulisse, 1989b; Tarone & Yule, 1989). Poulisse (1989) shows that these strategies can be applied either holistically or analytically for listening and speaking (although writing and reading are not addressed); Oxford (1990b) demonstrates that these can be applied to all four skills.

9. Language skill or learning mode
Cohen (1990, 1991) focuses on how language learning strategies (or in some instances, what we might term tactics for language learning) fit into different language skills or learning modes, such as oral production, writing, reading comprehension, vocabulary learning, and attention enhancement. When so many different criteria are used for categorizing language learning strategies, it is natural that the same strategy is classified differently by the same or different investigators. This makes reading the strategy research a very confusing activity and makes it almost impossible to summarize results across studies. The following three examples suggest some of the complications that occur when the same strategy (or actually, tactic) is classified different ways:

1. Asking questions for clarification or verification is classified as both a social strategy (e.g., Chamot, 1987a; Chamot & O'Malley, 1987; Chamot & Kupper, 1989; O'Malley et al., 1985b) and as a cognitive strategy (O'Malley et al., 1985a; Rubin, 1987). A parallel confusion exists for the behavior known as cooperation.

2. Monitoring one's own errors is usually categorized as a metacognitive strategy (see, e.g., Oxford, 1990b; Chamot & Kupper, 1989; O'Malley et al., 1985a). However, it is listed as a cognitive strategy by Rubin (1987), who claims that this strategy contains both cognitive and metacognitive elements. Stern (1983) classifies monitoring as an academic (explicit) learning strategy.

3. Seeking practice opportunities is called a metacognitive strategy (Oxford, 1990b) and a social strategy (Rubin, 1987). The probable assumption underlying Rubin's classification is that practice takes place with other people, while Oxford assumes that the learner might practice alone and/or with others. Also, classification of this behavior might depend on whether the emphasis is on the seeking or on the actual conduct of the practice opportunities.

The system in Table 1, which focuses on broad strategies with related tactics shown to support the strategies, avoids many of the double and triple classifications found across different researchers. It does so by focusing on the very basic clusters (strategies) of intentional behaviors as the organizing principle within a whole-person framework, with related tactics flowing directly from the strategies.

Strategy categorization conflicts do not just occur across investigators; they also arise for a single researcher or single group of researchers. An individual or a group often publishes somewhat different lists of language learning strategies at different times. This typically results from the evolution of a series of research studies, an evolution which is not usually explained very well (or at all) to research consumers such as teachers, students, or administrators.

The lack of concordance in strategy categories and concepts, while confusing even for the most diligent and intelligent reader, is actually related to differences in research methodology, and research methodology is a reflection of researchers' goals. Some of the identifiable goals include: analyzing the causes of linguistic error, describing a good language learner, defining learning processes, and validating teaching methods. Clearly, the goals of the research on cognitive and metacognitive strategies in the language area and the rarity of research on affective and social strategies may suggest that most language learning strategy researchers value the former more than the latter. The imbalance indicates where the investigators' chief
Oxford and Cohen concerns lie but implies little about the actual importance of these strategies or their contribution to language learning.

It is not surprising that strategy research methods vary greatly, and these methods strongly affect the categories and numbers of language learning strategies found in any study. For instance, if investigators use only a classroom observation scale, they are likely to miss all the unobservable concept- and hypothesis-formation behaviors that learners use. If researchers employ student surveys which omit learning strategies for understanding emotions and motivation, they will discover nothing about learners' use of such strategies. If scientists employ individualized think-aloud procedures without any student-to-student or student-to-teacher interaction, a host of interpersonal, interactive strategies may fail to appear.

Solution to the Problem

Although it would be a slight exaggeration to say that the field of language learning strategies has "one strategy classification system for each strategy researcher," this description is not too far from the mark. Investigators should come up with one or more acceptable sets of criteria for categorizing language learning strategies. Table 1 is an intentional attempt to do this, based on the concept of learning strategies for the "whole person" and the distinction between strategies and tactics. With so many different criteria used for establishing strategy systems as foundations of major research studies, it is predictable that language learning strategy investigations would often be confusing and contradictory. This intolerable situation, if it endures, will continue to hinder the language learning strategy field from achieving its scientific and educational potential. Differences in strategy classifications between groups of researchers need to be discussed and, when possible, resolved publicly in print, so that the significance of the research can be better understood.

Moreover, researchers need to be more explicit about how and why their minds change regarding classifications of language learning strategies. Multiple language learning strategy typologies from the same researchers (including the authors of this article) need to be explained as they evolve. In addition, researchers should be very clear in their research design. They should indicate any limitations on their results related to the way the research design is established. Better yet, researchers should use multimethod, multifactor studies that involve many different data collection and analysis techniques, both quantitative and qualitative. In addition, a combination of longitudinal and cross-sectional research would give a better picture than either one by itself (O'Malley & Chamot, 1990).

Strategy studies would benefit from the cooperation of groups of researchers in different locations, especially in different countries (as is now happening with a major language learning strategy study led by the first author, and encompassing Japan, Puerto Rico, Egypt, and mainland US).

Problem 4: Researchers Argue about Learner Strategies versus Learning Strategies—or What Contributes to Learning a Language


Learner strategies, according to Tarone (1980), are simply any strategies used by language learners. Tarone identifies three kinds of learner strategies: learning strategies, production strategies, and communication strategies. To Tarone, learning strategies are the actions by which the learner processes the second language input to gain linguistic knowledge. The goal of learning strategies is to assist the learner in language acquisition or learning.

Purportedly separate from these learning strategies (and thus viewed as "non-learning" learner strategies) are production strategies and communication strategies. These two groups are not called learning strategies because they supposedly do not directly contribute to learning. The goal of production and communication strategies is language use rather than learning.

1. Production strategies, according to Ellis (1986), include strategies employed unconsciously to enhance the automatic use of language knowledge already acquired, examples are simplification at early stages of language learning, complexification at more advanced stages (Littlewood, 1979), planning speech before producing it, and correcting speech afterwards (Seliger, 1980). (Note: It is not clear how planning and correcting can take place without some degree of consciousness, however.)

2. Communication strategies, rather narrowly defined as strategies for overcoming roadblocks in spoken communication although not in written communication, fall into two groups, according to Ellis (1986), who based his research on Faerch and Kasper (1983): reduction
strategies that involve giving up part of the communication goal through avoiding use of certain rules, speech acts, and functions; and achievement strategies that involve keeping the communication goal but compensating in some way, as in code switching, substituting, paraphrasing, word coining, restructuring, gesturing, and asking for help. Tarone (1983) notes three kinds of communication strategies: paraphrasing (approximation, word coinage, circumlocution); borrowing (literal translation, language switch, appeal for assistance, mime); and avoidance (topic avoidance, message abandonment).

Kellerman (1991) argues that most attempts at setting up taxonomies of communication strategies (and other compensatory strategies) are based on conflicting and inexplicit criteria and thus have doubtful psychological validity. Nevertheless, some of these taxonomies are widely used and reprinted (Scarcella & Oxford, 1992; Ellis, 1986).

Although production strategies and communication strategies are used by learners, and are therefore viewed as part of the range of learner strategies, as noted above, there are researchers who assert that these cannot be called learning strategies, because they do not have learning as a primary goal (e.g., O'Malley & Chamot; Selinker, 1972). We believe that this is a false dichotomy, because any strategy—such as a communication strategy—that allows the learner to keep participating in communication will be a potential enhancer of learning (Littlewood, 1979). Tarone (1981, 1983) states that communication strategies can indirectly enhance learning. Tarone argues that it is virtually impossible to distinguish between learning strategies and communication strategies for three reasons: (a) it is difficult to assess the real purpose for which the person uses the strategy; (b) the motivation might be both learning and communication simultaneously; and (c) even when the purpose is communication, learning often occurs anyway.

Solution to the Problem

There is no advantage for language learning strategy researchers to continue to quibble over whether a particular strategy directly or indirectly affects learning, as long as there is some effect on learning. There is no benefit to students or anyone else when investigators eliminate from strategy lists all purported indirectly-contributing strategies, such as the so-called communication strategies. In fact, if such “learning” versus “non-learning” distinctions are made, the confusion about what contributes to learning will only be perpetuated.

As shown in Table 1, it is feasible to include communication strategies in a broad organizational scheme of language learning strategies. Strategy 7 (producing oral and written language although lacking adequate linguistic knowledge) encompasses tactics that have traditionally been known as communication strategies or compensatory strategies; these contribute to learning by allowing students to continue to communicate even without all the requisite linguistic resources. (Production strategies are not shown in this taxonomy because Tarone (1980) and Ellis (1986) view them as unconscious and automatic.)

Problem 5: The Concept of “Strategic Competence” in the Well Known Communicative Competence Framework Is Too Narrow because It Is Usually Restricted to Speaking

The communicative competence framework of Canale (1983) and Canale and Swain (1980) has had a major effect on the foreign and second language field. This framework—which stresses grammatical, sociolinguistic, discourse, and strategic competences—is widely viewed as a four-part “prescription” for language instruction. Omaggio's (1986) book on proficiency-based instruction highlights the utility of the communicative competence framework, as does Scarcella and Oxford's (1992) Tapestry Approach to language learning and teaching.

However valuable the overall Canale and Swain communicative competence theory, the strategic competence aspect of this theory is limited, referring only to the learner's ability to use a small group of speaking-related strategies to compensate for inadequate grammar or vocabulary. These are the same strategies (really tactics) that Tarone (1980) and Ellis (1986) call communication strategies. For example, the learner uses gestures or circumlocution when the precise word is not known in a conversation. Thus, competence in using compensatory speaking strategies is the only type of strategic competence mentioned in the Canale and Swain framework of communicative competence.

More recently, Tarone and Yule (1989) have expanded strategic competence to encompass the use of communication strategies not just by the speaker but also by the listener. Thus, guessing and interpretation by the listener are at last admitted to the realm of strategic competence. While Tarone and Yule's expansion is a sign of progress, it is still not fully adequate because it suggests that compensatory strategies are not relevant to the major skill areas of reading and writing. Oxford (1990b) points out that the same general principles apply to compensating for missing knowledge in reading and writing, just as in speaking and listening. For instance, writers, like speakers, must often find ways to express themselves when they do not know all the relevant words; thus they use circumlocution and word coinage to get the point across. Readers, like listeners, frequently
encounter words they do not know and then have to infer the meaning from the context.

Ellis (1986) provides a good explanation of language learning strategies, but he often appears to restrict those strategies to the skill of speaking (and possibly the accompanying skill of listening). He provides examples of language learning strategies for formulaic speech and for creative speech:

1. Strategies for formulaic speech include pattern memorization, pattern imitation, and pattern analysis (see also Seliger, 1982; Fillmore, 1986; Krashen & Scardella, 1978).

2. Strategies for creative speech, in which the learner produces entirely novel sentences, are based on Paerch and Kasper (1980, 1983) and include:
   a. strategies for establishing interlanguage rules (hypothesis formation, simplification, inferencing, and hypothesis testing); and
   b. strategies for automatizing interlanguage knowledge (formal practice and functional practice).

Clearly, these language learning strategies refer just to oral-aural skills but could easily be expanded to reading and writing.

While early reference to strategic competence as a component of communicative language use (Canale & Swain, 1980) put the emphasis on “compensatory” strategies, that is, strategies used to compensate or remediate for a lack in some language area, Bachman (1990) provides a broader theoretical model for viewing strategic competence. There is an assessment component whereby the person sets communicative goals, a planning component whereby the person retrieves the relevant items from language competence and plans their use, and an execution component whereby the person implements the plan. After finishing, the learner may again perform an assessment to evaluate the extent to which the communicative goal was achieved.

Within this broader framework, it may still be the case that a fair number of strategies are, in fact, compensatory. Learners often omit material because they do not know it when put on the spot, or produce different material from what they would like to, with the hope that it will be acceptable in the given context. They may use lexical avoidance, simplification, or approximation when the exact word escapes them under pressure, or possibly because they simply do not know the word that well or at all. Yet probably other strategies that fall under the rubric of strategic competence in Bachman’s model are not compensatory.

As is the case with any theoretical model, learners may make differential use of the components of this model when performing specific communicative tasks. For example, there are learners who do not assess the situation before starting to communicate, and because of this they might violate certain sociocultural conventions. Likewise, there are learners who plan out their utterances before producing them while others would just start talking immediately. Recent research involving the use of verbal report directly after the performance of oral role-play interaction is beginning to obtain data regarding the extent of strategic assessment and planning actually taking place before the execution of apologies, complaints, and requests (Cohen & Olshatín, in press).

Solution to the Problem

Many people who adhere to the well-known Canale and Swain communicative competence framework have not realized the need to expand the typical usage of the concept of strategic competence to encompass compensatory and non-compensatory behaviors in all four skills: listening, reading, speaking, and writing. Any strategy framework needs to be broad enough to include language learning strategies for reading and writing as well as for listening and speaking. The language learning strategy framework in Table 1 addresses all four skills and deals with both compensatory and noncompensatory strategies that might be part of strategic competence. Tarone and Yule’s, Oxford’s, and Bachman’s attempts to expand the strategic competence concept need to be disseminated widely and considered well.

Problem 6: Many Studies Fail to Make the Conceptual Link between Language Learning Strategies on the One Hand and Learning Styles, Other Personality-Related Variables, and Demographic Factors on the Other Hand

Learning strategies do not operate by themselves, arising de novo every time to meet the need of a new and specific learning situation. Instead, they are directly tied to the learner’s underlying learning styles (general approaches to learning) and other personality-related variables (such as anxiety and self-concept) in the learner (Brown, 1991). They are also related to demographic factors such as sex, age, and ethnic differences (Oxford, 1989; Politzer, 1983).

Schmeck (1988) underscores the need to understand learning strategies in the context of learning styles, which he defines as the expression of personality specifically in the learning situation and which he divides into three categories: deep, elaborative, and shallow styles. Schmeck also exhorts researchers to view learning styles and learning strategies in the context of general personality factors such as the following: personality type (introvert/extrovert, reflective/impulsive,
field independent/dependent, which have often been viewed by other researchers as aspects of learning style, as shown in Oxford, 1990a), self-confidence, self-concept self-efficacy, creativity, anxiety, and motivation (intrinsic/extrinsic). His system is as follows:

1. **Deep learning style**, related to the **learning strategy of conceptualizing** (with tactics such as categorizing, comparing, hierarchically organizing). This style is connected with a stable, introverted, internally controlled, reflective, field independent personality that exhibits high self-confidence and intrinsic motivation. **Learning outcomes** are synthesis, analysis, evaluation, subsumption, schema development, and theory development. (Note: Table 1 lists some of these outcomes, such as analysis, as tactics.)

2. **Elaborative learning style**, associated with the **learning strategy of personalizing** (with tactics such as self-referencing, generating personal examples, using personal images). This style is linked with a stable, extroverted, internally controlled, impulsive, field dependent personality that displays high self-confidence and a combination of intrinsic and extrinsic motivation. **Learning outcomes** are application, personal growth, personality development, social development, and understanding of people.

3. **Shallow learning style**, linked to the **learning strategy of memorizing** (with tactics such as repetitive rehearsing, using mnemonics, encoding verbatim). This style is associated with a neurotic, externally controlled, anxious personality that shows low self-confidence and extrinsic motivation combined with fear of failure. **Learning outcomes** are descriptions of what was studied and literal reproduction.

A learning strategy disembedded from personality-related factors is "only a short-term prop for learning," according to Schmeck (1988, p.179, italics added). The highest learning performance and the best satisfaction are associated with congruent, well integrated packages of learning strategies along with personality-related factors, including learning style. It is easier to modify learning tactics than to alter underlying factors such as learning strategies and personality-related variables (including learning styles). However, modifying learning tactics without dealing with underlying factors can create severe dissonance in the learner. For some learners, it might be necessary to modify learning style, especially the shallow learning style.

Cronbach and Snow (1977) in their classic work on aptitude-treatment interaction stated that learning styles may moderate either the effectiveness of certain learning strategies or the effectiveness of the procedures used to teach those strategies to students. Thus, an understanding of students' learning styles may be essential for using learning strategies effectively or for providing useful training in improvement of learning strategies. Likewise, Ellis (1990) shows that instructional input is filtered through any given students' learning style.

Similarly, Pressley and associates (1990) emphasize that contemporary models of thinking (e.g., Baron, 1985; Brown, Bransford, Ferrara & Campione, 1983; Sternberg, 1985) are multidimensional, including strategies (procedural knowledge), knowledge about those strategies and about one's own thinking processes (metacognition), knowledge about the world in general (the knowledge base), motivational beliefs, and overall learning style. These components operate interactively. Therefore, research that ignores any of these factors is likely to result in only a partial picture of learning and thinking (Costa, 1990).

Whereas older models of thinking emphasized the "hardware" and/or a few "critical" cognitive processes (e.g., Atkinson & Shiffrin, 1968), these recent conceptualizations address the cognitive, metacognitive, and social-emotional aspects of thinking that both affect classroom functioning and can be altered using instruction. Thus, recent models of thinking are both more complete and more educationally relevant than their predecessors (Pressley et al., p. 8).

Naiman, Frohlich, and Todesco (1975) note that addressing the affective demands of language learning (related to emotions, attitudes, motivations, beliefs, and personality factors) is an important characteristic of "good language learners," along with more cognitive strategies. Bialystok (1978, 1981) shows that the learner's attitudes, world knowledge, and linguistic knowledge are important in strategy use. Politzer (1983) demonstrates how important it is to link strategy use with affective variables such as career motivation and with demographic factors like ethnicity and sex. Stern's list of strategies (1983) emphasizes social and affective strategies as well as active planning strategies and formal academic strategies. In a list of characteristics of successful language learners, Rubin (1987) notes psychological characteristics (e.g., risk-taking, tolerance for ambiguity, and willingness to appear foolish) and social learning strategies (e.g., seeking practice opportunities) along with communication strategies and cognitive strategies. Brown's books (1987, 1991) highlight the
crucial affective elements in language learning, and Horwitz and Young (1991) point out the role of language learning anxiety and cite language learning strategies to overcome such anxiety.

However, these wide-ranging variables have been largely ignored in most empirical language learning strategy studies in the last decade, which have often failed to gather, analyze, or report crucial personality-related, social, and demographic data about the subjects. Outside of the language field, researchers have clearly recognized the affective domain and its important role (see Weinstein, Goetz, & Alexander, 1988). Unfortunately, many language learning strategy studies in the 1980s have looked at cognitive and metacognitive strategy use but have frequently ignored factors such as motivation, beliefs, attitudes, anxiety, learning style, world knowledge, sex, and ethnicity—a situation that is both surprising and scientifically foolhardy.

The lack of concern about linkages between strategies and the affective (personality-related, motivational, and emotional) and social sides of the learner is reflected in many language learning strategy taxonomies, which usually include either no affective and social strategies (e.g., Bialystok, 1978, 1981; Carver, 1984; Marton, 1983; Seliger, 1982) or include only a small number of affective and social strategies dwarfed by large numbers of cognitive and metacognitive strategies (e.g., Chamot & O'Malley, 1987; Chamot & Kupper, 1989; O'Malley, Chamot, Stewner-Manzanares, Kupper, & Russo, 1985a and 1985b). Most language learning strategy survey and think-aloud procedures (described by Oxford, 1990b; Cohen, 1987) fail to include sufficient ways for students to report much use of affective and social strategies.


Solution to the Problem

Language learning strategy research could benefit from a greater range of variables in the future. Researchers could routinely gather information on sex, ethnicity, age, degree of language learning experience, world knowledge, motivation, anxiety, beliefs, attitudes, and learning style—along with data on the learning environment and teacher variables. This would make investigations much richer and far more informative. Just as importantly, it would also allow researchers to develop an appropriate theory base for strategy use. More comprehensive selection of variables would no doubt necessitate larger studies, which might cause researchers to work together more frequently rather than conducting smaller-scale, noncomparable studies. This would be an extremely helpful move.

In addition, language learning strategy taxonomies and assessment instruments (such as surveys, diaries, interviews, and think-aloud procedures) could be expanded to provide broader coverage of strategies that involve understanding of social and affective aspects of learning. Instead of giving very limited or nonexistent attention to strategies for managing these aspects, taxonomies and assessment tools could begin to reflect the true importance of these factors (Baron, 1985; Brown, 1987; Costa, 1990; Dansereau, 1988; Horwitz & Young, 1991; McCombs, 1988; Oxford, 1990b; Weinstein, Goetz & Alexander, 1988).

Any theory of how language learners learn cannot fail to include these aspects along with more overtly cognitive factors. Cognition is profoundly affected by social and affective variables such as emotions, attitudes, motivations, anxiety, social interaction, and personality type, as well as demographic variables such as age, sex, and ethnicity.

Problem 7: So Far It Is Impossible to Discern Appropriate Language Learning Strategies Classifications for Natural Settings or Technology-Assisted Instruction

Few studies have been done with language learning strategies in natural settings outside of the formal classroom. Underwood (1975) calls for the external validity of laboratory processes (i.e., learning strategies as studied in the classroom or in psychological laboratories) to be supported by evidence in more natural settings. Information on the use of strategies in a plethora of settings—inside and outside the ordinary classroom—is important for the development of a truly comprehensive system of strategies. Much more information is required on the use of strategies for gaining language skills in non-classroom environments (Oxford & Crookall, 1989).

Special learning situations, such as computer-assisted language learning (e.g., videodisc, intelligent tutoring systems, and computerized simulation) might also provide important data about the strategies people use. Technology provides a ready means of monitoring and recording strategies.

Solution to the Problem

Researchers should take up the challenge of gathering language learning strategy data in informal settings. Diary studies, strategy surveys, interviews, and think-aloud procedures are relevant tools for collecting such information outside of language classes. For example, learners could use the keyword technique for learning vocabulary in natural settings and then keep a diary about how effectively this
technique worked for them; all we have is laboratory data on this
 technique at the moment. Comparisons of strategy use between formal
classroom settings and informal out-of-class settings would be extremely
valuable for elucidating what really happens in language development.
Because computers offer such detailed and helpful data on students' movements
and behaviors, they are an ideal means for gathering strategy data in computerized language learning situations.

SUMMARY AND CONCLUSIONS

The authors of this paper have discussed seven problems in the
research field of language learning strategies. Most of the problems deal
directly with classification and conceptualization of these strategies. We
have cited the problems in detail (as manifested in our own classification
systems as well as the systems of others), and we have also offered
potential solutions. Further discussion among researchers— and among
users of the research— would certainly help identify additional solutions to
these difficult conundrums. Rather than avoiding discussion of the
problems (and thus exacerbating them), investigators should come to
grips with these difficulties. Strategy researchers are encouraged to
come together in a spirit of cooperation to provide and enact solutions to
the problems mentioned in this article, recognizing that the language
learner and the language teacher are our most important clients. In
order to do this, researchers may have to set aside certain theoretical
and methodological presuppositions that they have been making.

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