

# Misconception Analysis: A Necessary Complement to Foreign Language Teaching

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Language is a system involving various levels of meanings. Teachers have to realize that meaning is filtered through the users of language, in our case the learners of the target language. So, when there is some discrepancy in their interlanguage system or meaning links are missing, language does not function well and learning suffers (Gass 1988; Long 1990). VanPatten and Cadierno (1993) assert that if acquisition is to happen, then the learners must attend to how the meaning is encoded linguistically. According to them, "intake is that part of input that a learner comprehends and from which grammatical information can be made available to the developing system" (1993:227).

This is in line with Richards' (1990) suggestion that teachers of language should go beyond methods and focus on exploring the nature of effective classroom teaching and learning. So irrespective of teaching methods or modes of presentation, problem solving can be more effective if it first gives due attention to students' learning problems and needs, and then to matters of efficiency of methodology.

This article goes beyond methods in language teaching to suggest a practical proposal for dealing with language learning problems. It draws mostly on findings from cognitive psychology that emphasize learners and their learning needs. I have labeled the solution proposed here misconception analysis (MA). My proposal is the result of learning difficulties I have personally experienced, observation of other people's learning, consideration of teaching practices in Iran, and my understanding of learning theories and research. It is motivated by the fact that in foreign language learning, formal instruction is the primary source of input and consequently can be the source of much misunderstanding and wasted effort.

This article explains MA and its practical usefulness. There is a brief review of some cognitively-oriented and learner-focused research literature, which covers the need for addressing the misconceptions of learners. I will also discuss the application of MA in the language classroom.

## **What is misconception analysis?**

A misconception refers to a wrong assumption or understanding. So misconception analysis involves discovering and understanding misunderstandings and uncovering false assumptions. To take a classic example, people for many centuries thought the earth was flat or thought it was the center of the universe. Such notions influenced their whole system of related concepts about the earth and the universe. If a modern science teacher were to teach about the universe (e.g.,

eclipses, satellites, or even fuel for rockets) to people from centuries ago, the teaching would be unintelligible to them. They would resist these teachings if the teacher first did not demystify for them modern information about the earth and the universe, because without this information learners would consider the teachings meaningless.

Unfortunately, in some cases, the situation of language learners and teachers is not much different from this hypothetical example. As a result, students learn little and teachers and students get discouraged. But even more important, students misinterpret the material or create mistaken concepts, and then mistaken knowledge results.

The message of MA is that it is not enough to give information and have it received; it is also important to know how it is received, what is received wrongly, and what is behind the misunderstanding. One seemingly trivial misunderstanding may have serious learning consequences in the long run. Doing MA is a hands-on teaching strategy to address this problem, one which can be used at different points in the teaching process. Before proceeding with this explanation and providing concrete suggestions for dealing with misconceptions, let's examine the concept in the related literature on knowledge development.

## **Cognitive psychology and MA**

Many assumptions are involved in linking new pieces of information and making sense of them as coherent items (Charniak 1972; Rumelhart 1977). Applying this to reading texts, Solso (1995:330) concludes that:

The greater the knowledge of a reader, the better the comprehension of text.... Knowledge is an organized collection of information.... Comprehension within this framework is perceived more as confirmation of hypotheses about the way the world is thought to be than as a purely original assimilation of new facts.

Lipson (1983) has evidence that suggests even young readers will reject text information if it is inconsistent with an already possessed interpretation that they believe to be correct. Lipson's findings, along with schema theory approaches to comprehension, are supported by Bruner, Goodnow, and Austin's (1956) conclusion about the economy of concept formation, which links problem solving and hypothesis testing. Bruner et al. suggest that different instances of prior experience can increase or decrease the cognitive strain involved in assembling information to understand new concepts.

Ausubel's (1963, 1977) receptive-expository view emphasizes the world of learners and the continuity of semantic development or, as Ausubel calls it, "meaningful verbal development." According to Ausubel, an object has meaning when it elicits an image in the "content of consciousness" as a result of being related to something already known. A concept acquires meaning when it is related to an idea that is already present in the mind. In other words, for a stimulus or concept to have meaning, there must be something in the learner's cognitive structure to which it can be related. In Ausubel's view, whether or not material is meaningful depends more on the preparation of the learner and on the organization of the material than on the method of presentation (Brown 1994).

While these concepts of knowledge attainment continue to have profound lessons for pedagogy, their implications have been incorporated only partially into teaching practice. Ausubel (1968) asserted that if he had to reduce all of educational psychology to just one principle, he would say that the most important single factor influencing learning is what the learner already knows. Often teachers fail to take account of learners' schemata. If students entertain false assumptions in their absorption of material, however lucid the presentation of that material is, they may take a wrong route and interpret the material incorrectly. The students may create mistaken mental structures, which may be the basis for more false interpretations.

A farsighted interpretation of approaches to learning therefore does not content itself with just good presentation of material. It also considers the students' minds and investigates what sense they make of the material presented. In the process, it informs us not only of what a concept is but also of what it is not.

## **Misconceptions in language teaching**

Virtually all people can recount misconceptions and illusions which they lived with for a long time and which cost them lost opportunity for intellectual growth. In the field of language teaching, many teachers have wrestled with misconceptions about "true" communicative language teaching (CLT). For example, some teachers in their first encounters with CLT come to believe that CLT means not teaching grammar. Since this notion is apparently counterintuitive, it gives teachers and students alike every sort of trouble, from internalization of a wrong picture of CLT, to resistance to applying CLT principles in the classroom, to a lack of motivation for teaching and learning necessary grammar points. Only later may they realize that grammar has an important place in CLT and that only the mode of presentation and practice are different from traditional language teaching approaches.

At times there can be as many misconceptions as there are target language concepts and elements to teach and learn. Fortunately, many concepts and elements are learned easily and quickly, either because there is enough evidence to support them or because they are straightforward. Therefore, many misconceptions are bypassed. However, many misconceptions may settle in the students' minds and hinder or confuse their learning, much as computer viruses corrupt computer programs. In language learning these misconceptions can, for the sake of convenience, be classified into four groups:

### *1. Misconceptions about the goals of language learning*

It is widely agreed that if students have realistic and specific goals that they can visualize and imagine themselves attaining, their motivation and strategy use will improve. Obviously, this requires the teacher to accurately communicate the objectives of the instructional program to the students and ensure that students' expectations match the program goals as they are interpreted by the students.

### *2. Misconceptions about the nature of language*

Related to the point above is the need to address misconceptions which students may have about what language is. One common misconception, for example, is that language consists of a specified body of rules and exceptions defined by linguists, which should be learned in a linear

fashion. Certainly, the way the foreign language learner conceptualizes the nature of language in general, or the target language he is learning, has an impact on the strategies he employs.

### *3. Misconceptions about the processes and strategies of language learning*

Dweck and Leggett (1988) maintain that academic performance and motivation are determined primarily by students' implicit theories of learning and epistemologies. According to a large body of research (e.g., Wineburg 1991; Wade, Thompson, and Watkins 1994), students' beliefs affect their behaviors and the task-engagement patterns they choose. Teachers should help students adopt more valid implicit models of learning and teach them "some technical know-how about how to tackle language effectively" (Brown 1994). Teachers should also help learners change ineffective or counterproductive strategies and overcome false beliefs about how languages are learned.

### *4. Misconceptions about language elements (grammar rules, vocabulary items, and so forth)*

This is the minute-by-minute business of teachers. It may take deep insight, sharp eyes and ears, and imagination, but it will quickly pay off with perceptible changes in the linguistic behavior of the learners.

## **MA in the classroom**

Misconception analysis can be done in different ways and at different levels. It can be carried out through informal classroom routines or through quite formal procedures. It can focus on very small points of grammar, vocabulary, or phonology. Learners often have misconceptions concerning lexicon. For example, sometimes my students get confused because English speakers may refer to two or three types of cooking vessels using the word "pot," while Iranians have different names for them. MA can also illuminate broader issues of language, language learning, or communication. For example, one common misconception among learners about language learning is that it simply requires learning a big list of grammar rules. The teacher's observations can provide a rich source of information about students' misunderstandings. The wise teacher knows when and for what items he must be concerned.

Dakin (1973) defends the concept of "negative instruction," or correcting mistaken knowledge, as a complement to "positive instruction." Negative instruction plays an important role in preventing the formation of misconceptions. Dakin goes on to suggest that teachers make arrangements for students to speak their minds concerning language points and for teachers to provide corrective feedback. This feedback will depend on what demystification and clarification are needed. In this respect, Dakin (1973:27) suggests the following:

Students need to be set traps which will expose the nature of their hypotheses, of their developing understanding of the points of issue.... The purpose of such traps is not to give discouragement or a sense of insecurity...but to create the conditions for negative feedback which unaided problem solvers are sometimes reluctant to seek.

What Dakin proposes is a procedure for guiding students' reasoning and forestalling misconceptions, but the teacher should also pay heed to any misconceptions already established which may "contaminate" the interlanguage system of the learner.

Tests can also give some ideas about students' misunderstandings and illusions. Of course, the teacher should differentiate between problems which are due to lack of knowledge or ability and remedied through positive instruction (describing something in terms of what it is) and problems due to misunderstanding, which require negative instruction (describing something in terms of what it is not).

Another way to become familiar with the way students understand and interpret the material is using a questionnaire or simply questioning. For example, the teacher can ask students about how and why they do transformation exercises drills. If students do pattern drills, they should remember that changing statements into questions is solely for the purpose of practice—it is not something found in normal, daily language use. Finally, many misconceptions can be discovered intuitively by looking back reflectively at one's learning experience (Ashton-Warner 1965; Richards 1990).

## Conclusion

Misconceptions can suppress great potential and frustrate attempts at learning. In practice, the formation of misconceptions by learners during formal study is largely neglected. It is important for teachers to be aware of how students interpret what they are being taught. The thrust of misconception analysis is not that it is based on new and ingenious ideas; as mentioned above, it is derived from theories proposed to explain learning. Its significance is that MA emphasizes an unduly neglected aspect of instruction, attention to which can help remove obstacles for learners. It is a call to rethink the notion that gaps in language learning can be filled only by positive instruction. Misconception analysis is also a step beyond giving negative feedback. It takes into account misconceptions which never directly surface in the performance of learners but nevertheless are active in halting and impeding the most basic processes of understanding and learning.

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