Cognitive style and learning strategies

JoAnn Salvisberg looks at current SLA theories and their possible applications to the classroom situation

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People learn and process new information in different ways. For decades researchers have been studying and comparing the personality traits and cognitive learning styles of students to discover any distinguishing trait patterns (i.e. more characteristic of academically successful students than other learners). Moreover, many believe that if the classroom environment and even the teacher's teaching style can be tailored to meet the students' learning styles, learning as well as the student's self-concept as a learner will increase (Corazza, Gustin and Edelkind, 1995). This article will offer a brief overview of differences in style and strategies and discuss the implications for teaching.

Learning style

Learning style, which refers to an individual's cognitive style (i.e. link between cognition and personality) within an educational context, indicates the preferred way he/she approaches new information. Although we share similar learning patterns, preferences, and even approaches, everyone learns and processes information in their own way (Conner, 2003). However, these are 'tendencies' and a person may employ a different style depending on the circumstances (Witkin and Goodenough, 1981). Researchers have been exploring possible links between learning style and second language acquisition (SLA), and the implications for the SLA classroom.

For example, researchers have discovered what seem to be paradoxical hypotheses, that both field independence (FI) and field dependence (FD) are linked to SLA. FI is believed to involve 'analysis, attention to details, and mastering of exercises, drills, and other focused activities' (Brown, 2000: 115). Naiman *et al* (1978) hypothesized that people who could break up a dense visual field and identify certain elements inside it (e.g. the Hidden Figures Test which has geometric figures 'hidden' within a complex pattern) were field independent and analogous to second language (L2) learners who can identify specific language elements within a larger context. On the other hand, FD learners, who are usually more social, empathetic and perceptive of others, are better at acquiring communicative skills. According to Brown (1977), although FI learners are more successful in classroom learning and testing, FD may be more beneficial as these learners excel in natural (e.g. untutored) SLA, and this *acquisition* (versus *learning)* of language better equips learners to communicate with native speakers.

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Furthermore, studies have found that children, who are predominantly FD, *acquire* functional language subconsciously, where adults *learn* by paying more attention to form (e.g. grammar). This not only supports theories that children learning a first language (FL) have an advantage over adults in SLA, but could also explain Krashen's (1977) theory that *acquisition* and *learning* are not synonymous. It should not be assumed, however, that all adults are field independent and unable to acquire language. As previously mentioned, although individuals may generally employ a particular style (i.e. FI), in certain circumstances they may exhibit other styles (e.g. FD). In the L2 classroom the challenge for the teacher is to discover each student's general inclination, and encourage them to be flexible in selecting the style which is most appropriate for a particular context.

This refers not only to FI and FD styles. There are other cognitive styles, as those listed below, which should be considered for their implications for language learning and teaching within the SLA context.

The characteristics of many cognitive styles tend toward either an analytic or holistic approach in dealing with new information. The cognitive learning style and personality of the individual, therefore, directly affect the learning strategies used.

Learning strategies

Just as learners possess various cognitive style preferences, which may change depending on circumstances, they may employ different learning strategies depending on the situation. When learning a second language (L2), the learner might select the best strategies (e.g. actions, behaviors) for apprehending, internalizing, and using the L2 (Oxford, 1990). Good L2 learners, according to Rubin (1975), are willing and accurate guessers; have a strong drive to communicate; are often uninhibited; are willing to make mistakes; focus on form by looking for patterns and analyzing; take advantage of all practice opportunities; monitor their speech as well as that of others; and pay attention to meaning.

Research studies indicate that a number of factors influence the L2 learner's choice of strategies: motivation, gender, cultural background, attitudes and beliefs; age and L2 stage; learning style; tolerance of ambiguity (Oxford, 1990, 1994). Researchers have also substantiated the effectiveness of learning strategies in the L2 acquisition process, specifically: strategies-based instruction (SBI) and autonomous self-help training (Brown, 2000).

Implications for L2 teaching

One of the current buzzwords in English L2 teaching circles is 'learner-based' instruction. Teaching learners how to learn, it is believed, will better equip the learners in their SLA quest. According to Wenden (1985), learning strategies is the key to learner autonomy. Oxford lists a number of principles for strategies training based on L2 strategy training research (1994):

- L2 strategy training should be based on students' attitudes, beliefs, and stated needs.
- Strategies should be chosen which mesh with each other to fit the requirements of language tasks, learners' goals, and learners' style of learning.
- Training should be integrated into regular L2 activities over a long period.
- Students need plenty of opportunities for strategy training during language classes.
- Strategy training should include explanations, handouts, activities, brainstorming, and materials for reference and home study.
- Affective issues (anxiety, motivation, beliefs, and interests) – all of which influence strategy choice – should be directly addressed by L2 strategy training.
- Strategy training should be explicit, relevant and provide sufficient practice with varied L2 tasks involving authentic materials.
- Strategy training should not be solely tied to the class at hand, but also provide strategies which transfer to future language tasks beyond a given class.
- Strategy training should be somewhat individualized, as different students prefer or need certain strategies for particular tasks.
- Strategy training should provide students with a mechanism to evaluate their own progress and to evaluate the success of the training and the value of the strategies in multiple tasks.

The purpose is not to require all students to use the same strategies, but to become more active, autonomous, self-directed, and discerning of the strategies which are best for them.

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For reasons of space a full list of references is available on request from the author.

Cognitive style	General characteristics	Implications within the SLA context
Category width	broad categorizers put too many items in a group and/or in wrong group; narrow categorizers exclude appropriate items	broad categorizers make more errors of overgeneralization; narrow categorizers 'formulate more rules than are necessary' (Larsen-Freeman and Long, p. 195)
Reflectivity/ Impulsivity	reflective people tend to weigh all the evidence before making a decision; impulsive people tend to make snap decision	reflective learners are generally slower, but are more accurate/make fewer errors than impulsive learners; fast accurate (good guessers) are considered best learners
Aural/Visual	people with aural cognitive style prefer listening to input; people with visual style prefer visual aids (e.g. texts, charts)	although many learners are considered bi-modal, others perform better when taught in their preferred style in class; aural people have difficulty with speed reading tasks
Analytic/ Gestaltic	analytic learners are rule-formers, more accurate than fluent; gestalt learners are data-gatherers, more fluent than accurate	analytic learners tend to analyze words and phrases before stringing them together into meaningful utterances; gestaltic learners take a more holistic approach, take risks
Tolerance of ambiguity	high tolerance accepts experiences that are out of the ordinary, low tolerance prefers conventional ideas and reality	a high tolerance of ambiguity is positive in regard to language inconsistencies and L1 interference, but learner may not be able to puzzle out the rules and subsume them with other cognitive data; low tolerance learners tend to reject inconsistencies, but may become too dogmatic
Left-brain/ Right-brain Function	in most people the left-hemisphere is where analytical, logical, intellectual, mathematical, and linear processing takes place; the right-hemisphere is intuitive, and processing is more holistic, integrative, and emotional	left-brain dominant learners prefer a deductive style of teaching, deal better with abstract concepts, tend to break language bits down and analyze them; right-brain dominant learners prefer inductive style of teaching, are better at dealing with whole images/meanings and generalizations