

filter preventing information from entering the system (e.g., Broadbent, 1957). Treisman (1960) showed, however, that attention is not an all-or-none proposition and suggested that it serves to attenuate, or tune out, stimulation. Her ideas are easily illustrated by thinking about what happens at parties. You may be attending to one conversation, ostensibly unaware of what else is being said around you. But when you hear your name spoken or someone else talking about a topic that interests you, your attention shifts. Apparently enough information was being processed to prompt you to react and pay closer attention to the secondary source.

Researchers have come to view attention as a resource with limited capacity to be allocated and shared among competing goals (cf. Kahneman, 1973; Grabe, 1986). This suggests that learners have some control over the process and may selectively focus attention to meet certain ends. It is also true, however, that some tasks require relatively little attention and may be accomplished effortlessly and automatically. The concepts of selectivity and automaticity are important aspects of attention that hold implications for instruction. Let us consider each in turn.

Selective Attention

Selective attention refers to the learner's ability to select and process certain information while simultaneously ignoring other information. The extent to which individuals can spread their attention across two or more tasks (or sources of information) or focus on selected information within a single task depends upon a number of factors. The most obvious, perhaps, is the meaning that the task or information holds for an individual. Your name spoken in a crowded room catches your attention because it is highly meaningful to you.

Second, similarity between competing tasks or sources of information makes a difference. It is hard to listen to two conversations at the same time when both speakers are the same sex and are speaking in a similar tone and volume. Imagine the poor student, for example, who is trying to listen to the teacher at the same time a classmate talks in her ear. Similarly, a learner may enjoy studying to classical music but find her concentration slipping when rock music is played.

Task complexity or difficulty is a third factor that influences attention. Simple tasks, such as winding yarn into a ball, require relatively little attention and are easily done at the same time as other things. Watching a light-hearted TV comedy, putting together a jigsaw puzzle, and talking to your boss about tomorrow's schedule are probably all tasks that can be accomplished simultaneously. But reading a medical history for purposes of diagnosis or assembling an intricate set of electrical circuits demands more complete and focused attention. A task may also demand more attention when it is something about which the learner has little prior knowledge. For example, a post-baccalaureate student taking his first course in learning