How can different learning styles be addressed with consistent expectations?

Research and Best Practice

Learning styles are collections of personal characteristics, strengths, and preferences, describing how individuals acquire, store, and process information. Learning style factors include information processing modes, environmental and instructional preferences, cognitive capabilities, and personality features. Individuals may demonstrate a balance among the dimensions of a learning style, or they may show strengths and weaknesses. Strengths and weaknesses may have implications for course success, and eventually for career choice. Groups of students from different cultures may exhibit distinct average learning styles, but there are often such broad within-group variations that generalizations about learning styles and cultural background are not reliable.

Learning styles not only influence how individuals learn, but also how they teach. Teachers often teach in the manner in which they had been taught even if it does not support the learning style preferred by most students. Teachers aware of their own teaching styles are able to make better choices of instructional strategies that do not impede learning. They can interpret students’ questions, comments, and answers in the context of learning style variations. For collaborative group work, multi-style student teams will optimize inquiry and problem-solving.

It is important for students to know their learning style strengths and weaknesses and to develop a set of learning strategies to use their strengths and compensate for weaknesses. When instructed in the use of various learning strategies, students become more efficient and effective in their studying and more likely to attribute success or failure to their own choice of learning behavior rather than to their innate competency. Science teachers who have taught their students about learning styles find that they learn the material better because they are more aware of their thinking processes. Students conscious of learning style differences develop interpersonal communication skills critical to adult success.

Longitudinal studies of outcomes of instruction specifically geared to a broad range of learning styles show students have improved learning, increased satisfaction with instruction, more skill in applying knowledge, and enhanced self-confidence. Science teachers should note that an inquiry approach incorporates aspects of various learning styles.

“They’re not dumb, they’re different.”
Tobias, 1990.
Classroom Implications

Learning style strengths and weaknesses can influence task success and overall achievement. Students should know personal learning strengths and weaknesses, and be able to use strengths to compensate for weaknesses. Tools for assessing learning (and teaching) styles are available. They can provide clues, not labels, to personal styles; learning styles are preferences, not traits or abilities. Students need to learn strategies for coping with varied learning environments and how to modify or generalize strategies for novel situations. Strategy use includes knowledge about the strategy, when to use it, and how to tell if it worked.

When there is a significant unaddressed mismatch between teaching and learning styles, students are inattentive, bored or discouraged, and perform poorly. In response, teachers may become overly critical, misinterpret poor scores as low ability (which exacerbates the situation), or become discouraged with teaching. Therefore, teachers must know how to identify learning and teaching styles, and how to teach various learning strategies. They can use differentiated instruction that is varied enough to meet students’ needs while respecting diversity. Flexible teaching and assessing benefits learners who choose among standards-based learning methods and products.

If teachers teach exclusively in a student’s less preferred style, discomfort may interfere with learning. However, students must experience non-preferred learning styles. Preferred styles are not static, and skill development in non-preferred modes provides advantageous mental dexterity. Learning in early stages of a curriculum unit may be more efficient using a different style than later in the same unit. It is important that the teacher balance instructional methods so that all students are taught partly in their preferred styles, but also practice learning in less-preferred modes. The teacher’s choice of learning style typology within which to plan lessons is irrelevant. Teaching that addresses all dimensions (“teaching around the cycle”) on most of the theoretical models is more effective than unidimensional teaching.

In assessing students whose learning will be demonstrated through different learning styles, it is important for the teacher to consider the criteria for success. Demonstrations may vary, depending on learning styles, but in a standards-based classroom, the expectations of content and process coverage may be met through any demonstration that addresses the standards.

References


Tobias, S. (1990). They’re not dumb, they’re different: Stalking the second tier.