The Role of Learning Principles in Schools

Learning Principles guide actions in various aspects of schooling; e.g., instructional decision-making, selection of curriculum resources, planning professional development, and resolving pedagogical debates.

Once articulated and established in a school, the principles function like an education "bill of rights": a lens through which all curriculum, instruction, and assessment practices can be viewed to determine whether or not a given practice is in service to the mission of understanding. Also, the principles can guide de-personalized decision-making about learning-related issues, such as teaching practices, selection of instructional resource materials, and school policies/structures (e.g., grading and reporting).

It is critical that staff come to "own" a set of learning principles either through drafting an original set or adopting/revising a previously developed list, such as the nine learning principles delineated in the tool.

Step 1: What do we believe about learning?
Step 2: What does research tell us? Once the full list is completed, assign a small team
Step 3: How should these beliefs guide our curriculum, instruction, and assessment decisions?

Ideas, Examples, Implications

Schooling by Design: Key Learning Principles

1. The goal of all learning is fluent and flexible transfer – powerful use of knowledge, in a variety of contexts.

2. Meaning is essential to learning, hence it is essential to teaching and assessing: learning goals must make sense to the teacher and to the learner. There must be regular opportunities to see the value of what we are asked to learn, how it relates to past learning and how it will relate to future learning.

3. Successful learning requires metacognition: learning how to reflect, self-assess, and use feedback to self adjust. These matacognitive processes can (and should) be taught explicitly.

4. The complexity of learning requires teachers to draw upon a rich repertoire of teaching and assessing strategies carefully matched to the learning goals.

5. Learning is most effective when differences in learners' prior knowledge, interests and strengths are accommodated.

6. Greater learning depends upon the right blend of challenge and comfort – knowing that success is attainable, and realizing that persistent effort will pay off.

7. To maximize learning, learners need multiple opportunities to practice in risk-free environments, to receive regular and specific feedback related to progress against standards, and timely opportunities to use the feedback to re-do and improve.

8. All learning-related work in schools should be judged against standards related to learning goals (for both students and adults) and reflecting how people learn.

9. As a model learning community, a school appropriately requires learning from every member of its community, since continual learning is vital for institutional as well as personal success.

10. All learners are capable of excellent work, if the right conditions for learning are established.

Note that these principles apply to all members of the educational community, staff as well as students. These principles serve as standards against which any proposed reform of schools should be judged.

L.R.D.C. Principles of Learning

1. Learning is an active process in which the learner uses sensory input and constructs meaning out of it. The more traditional formulation of this idea involves the terminology of the active learner (Dewey's term) stressing that the learner needs to do something; that learning is not the passive acceptance of knowledge which exists "out there" but that learning involves the learner s engaging with the world.

2. People learn to learn as they learn: learning consists both of constructing meaning and constructing systems of meaning. For example, if we learn the chronology of dates of a series of historical events, we are simultaneously learning the meaning of a chronology. Each meaning we construct makes us better able to give meaning to other sensations which can fit a similar pattern.

3. The crucial action of constructing meaning is mental: it happens in the mind. Physical actions, hands-on experience may be necessary for learning, especially for children, but it is not sufficient; we need to provide activities which engage the mind as well as the hands.

4. Learning involves language: the language we use influences learning. On the empirical level. researchers have noted that people talk to themselves as they learn. On a more general level. there is a collection of arguments, presented most forcefully by Vigotsky, that language and learning are inextricably intertwined.

5. Learning is a social activity. Our learning is intimately associated with our connection with other human beings.

6. Learning is contextual. We do not learn isolated facts and theories in some abstract ethereal land of the mind separate from the rest of our lives: we learn in relationship to what else we know, what we believe, our prejudices and our fears.

7. One needs knowledge to learn. It is not possible to assimilate new knowledge without having some structure developed from previous knowledge to build on. The more we know, the more we can learn. Therefore any effort to teach must be connected to the state of the learner, must provide a path into the subject for the learner based on that learner's previous knowledge.

8. It takes time to learn: learning is not instantaneous. For significant learning we need to revisit ideas, ponder them try them out, play with them and use them. If you reflect on anything you have learned, you soon realize that it is the product of repeated exposure and thought. Even, or especially, moments of profound insight, can be traced back to longer periods of preparation.

9. Motivation is a key component in learning. Not only is it the case that motivation helps learning, it is essential for learning. This ideas of motivation as described here is broadly conceived to include an understanding of ways in which the knowledge can be used. Unless we know "the reasons why", we may not be very involved in using the knowledge that may be instilled in us. even by the most severe and direct teaching.

Source: Lauren Resnick, Director Learning Research and Development Center University of Pittsburgh

Learner-Centered Psychological Principles: A Framework for School Redesign and Reform

Cognitive and Metacognitive Factors

1. Nature of the learning process.....The learning of complex subject matter is most effective when it is an intentional process of constructing meaning from information and experience.
2. Goals of the learning process..... The successful learner, over time and with support and instructional guidance, can create meaningful, coherent representations of knowledge.
3. Construction of knowledge..... The successful learner can link new information with existing knowledge in meaningful ways.
4. Strategic thinking..... The successful learner can create and use a repertoire of thinking and reasoning strategies to achieve complex learning goals.
5. Thinking about thinking..... Higher order strategies for selecting and monitoring mental operations facilitate creative and critical thinking.
6. Context of learning..... Learning is influenced by environmental factors, including culture, technology, and instructional practices.

Motivational and Affective Factors

7. Motivational and emotional influences on learning..... What and how much is learned is influenced by the learner's motivation. Motivation to learn, in turn, is influenced by the individual's emotional states, beliefs, interests, and goals, and habits of thinking.
8. Intrinsic motivation to learn..... The learner's creativity, higher order thinking, and natural curiosity all contribute to motivation to learn. Intrinsic motivation is stimulated by tasks of optimal novelty and difficulty, relevant to personal interests, and providing for personal choice and control.
9. Effects of motivation on effort..... Acquisition of complex knowledge and skills requires extended learner effort and guided practice. Without learners' motivation to learn, the willingness to exert this effort is unlikely without coercion.

Developmental and Social Factors

10. Developmental influences on learning..... As individuals develop, there are different opportunities and constraints for learning. Learning is most effective when differential development within and across physical, intellectual, emotional, and social domains is taken into account.
11. Social influences on learning..... Learning is influenced by social interactions, interpersonal relations, and communication with others.

Individual Differences

12. Individual differences in learning..... Learners have different strategies, approaches, and capabilities for learning that are a function of prior experience and heredity.
13. Learning and diversity..... Learning is most effective when differences in learners' linguistic, cultural, and social backgrounds are taken into account.
14. Standards and assessment..... Setting appropriately high and challenging standards and assessing the learner as well as the learning progress--including diagnostic, process, and outcome assessment-are integral parts of the learning process.

Source: American Psychological Association (1995). *Learner-centered psychological principles: A framework for school redesign and reform. Washington, D. C.: American Psychological Association. (12 p.)*

Conditions for Powerful Learning

Dr. Ronald S. Brandt

In general, we can say that people learn well when:

Ideas, Examples, Implications

What They Learn

1. What they learn is personally meaningful; they feel a need to learn it.

2. What they learn is challenging and they accept the challenge.

3. What they learn is appropriate for their developmental level.

How They Learn

4. They can learn in their own way and have some degree of choice and control.

5. They use what they already know as they construct new knowledge.

6. They have opportunities for social interaction.

7. They get helpful feedback.

8. They acquire and use strategies.

The Setting in Which They Learn

9. They experience a positive emotional climate.

10. Their environment supports the intended learning.

Source: Brandt, R. (1998). *Powerful Learning*. Alexandria, VA: ASCD

