

LEARNING THEORIES

links the teacher to the child learner, as it relates teaching events to learning processes and demonstrated learning outcomes.

"Theory links the teacher to the child learner, as it relates teaching events to learning processes and demonstrated learning outcomes."

Teachers—and parents—concerned with enhancing the musical development of children will be well served by the brief introduction to theories of instruction and learning that follows. Selected research and recommendations by theorists in psychology, sociology, anthropology, and education are noted, as well as the ways in which these theories can inform the practice of music instruction. Table 2.1 sketches selected theories that are relevant to teaching music to children.

TABLE 2.1 *Summary of Selected Theories Informing Music*

THEORIST	THEORY	PRINCIPAL FEATURES
<i>Stage and Phase Theories</i>		
× Jean Piaget	Stage-dependent theory	Children progress through four stages of intellectual development: sensorimotor, preoperational, concrete operations, and formal operations
× Jerome Bruner	Modes of representation	Learners progress through three ways of representing meaning or understanding, related to, but not dependent on, maturation: enactive, iconic, and symbolic
Lauren Sosniak	Developmental stages of the pianist or performer	Student musicians progress through three phases: tinkering, technical, and masterful music making
Gregory Bateson; Catherine Ellis	Learning I, II, III	Learners progress through three phases: enculturation, acquisition of skills or competence, and personal and aesthetic expression
<i>Musical Play and Socialization Theories</i>		
G. Stanley Hall	Musical play	Children train for adulthood through games; musical play leads to musical understanding
× Lev Vygotsky	Socialization	Children are socialized through adult intervention and guidance; socialization leads to acquisition of cultural knowledge
<i>Constructivist Theory</i>		
× David Jonassen	Constructivism	Children develop their understanding through the meaning they make from their experiences
<i>Reinforcement and Social Learning Theories</i>		
B. F. Skinner; Robert Thorndike	Reinforcement	Learning can be shaped through the process of positive or negative reinforcement; appropriate behaviors are shaped through successive approximation techniques
Albert Bandura	Social learning	Children observe and emulate their adult models
<i>Learning Style Theories</i>		
Richard Restak	Cerebral dominance	Learners are dominated by left-hemispheric (linear) or right-hemispheric (holistic) processing

(Continued)

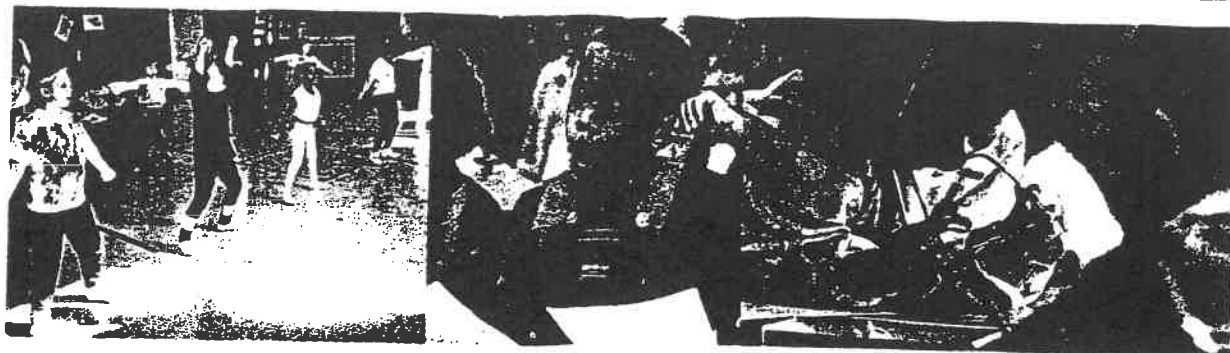
TABLE 2.1 *Summary of Selected Theories Informing Music (Continued)*

THEORIST	THEORY	PRINCIPAL FEATURES
<i>Learning Style Theories</i>		
X Howard Gardner	Multiple intelligences	Learners possess one or more types of intelligence or ways of being intelligent
Walter Barbe; Raymond Swassing	Learning modalities	Learners process information through a preferred sensory channel: visual, auditory, or kinesthetic
Rita Dunn and Kenneth Dunn	Learning style model	A variety of factors influence learning: environmental, emotional, social, and physical
X Harold Witkin	Field dependence and field independence	Learners may be content bound, experiencing concepts as embedded within their environment; or content independent, experiencing concepts as discrete entities removed from their background
Isabel Myers; Peter B. Briggs	Myers Briggs Type indicator	Learners may demonstrate one or several of sixteen Myers-Briggs personality types that influence the way they approach the learning task: extroversion/introversion, sensing/intuitive, thinking/feeling, and judging/perceiving
<i>Instructional Theories</i>		
David Ausubel	Meaningful reception	Students acquire information most effectively when teachers package lessons well and prepare students through "advance organizers"
Jerome Bruner	Discovery learning; spiral curriculum	Students learn through exploration and problem solving; subject matter can be taught to children through age-appropriate experiences and can be embellished through repeated exposure
Robert Gagné	Events of instruction	Learners progress through eight instructional events, from awareness and attention through concept formation and transfer
Edwin Gordon	Music Learning Theory	Students progress through an eight-stage process that begins with aural and oral experiences with music and ends with theoretical understanding; audiation is the goal

Stage and Phase Theories

A number of theories refer to stages, phases, or levels through which children or adult learners proceed in gaining knowledge. Some of these multileveled theories stem from developmental psychology and are called "stage dependent," referring to the intellectual stages that children pass through as they mature. Others are not governed by maturation but nonetheless feature earlier stages of learning that provide the foundation for later, more complex learning. Whatever the emphasis, multileveled theories establish that children do not learn all at once, but bit by bit, and in increasingly complex ways over time.

The stage-dependent theory of Swiss biologist Jean Piaget (1952), now a



SEVEN STYLES OF LEARNING

TYPE	LIKES TO	IS GOOD AT	LEARNS BEST BY
LINGUISTIC LEARNER <i>"The Word Player"</i>	read write tell stories	memorizing names, places, dates and trivia	saying, hearing and seeing words
LOGICAL/ MATHEMATICAL LEARNER <i>"The Questioner"</i>	do experiments figure things out work with numbers ask questions explore patterns and relationships	math reasoning logic problem solving	categorizing classifying working with abstract patterns/relationships
SPATIAL LEARNER <i>"The Visualizer"</i>	draw, build, design and create things daydream look at pictures/slides watch movies play with machines	imagining things sensing changes mazes/puzzles reading maps, charts	visualizing dreaming using the mind's eye working with colors/pictures
MUSICAL LEARNER <i>"The Music Lover"</i>	sing, hum tunes listen to music play an instrument respond to music	picking up sounds remembering melodies noticing pitches/rhythms keeping time	rhythm melody music
BODILY/KINESTHETIC LEARNER <i>"The Mover"</i>	move around touch and talk use body language	physical activities (sports/dance/acting) crafts	touching moving interacting with space processing knowledge through bodily sensations
INTERPERSONAL LEARNER <i>"The Socializer"</i>	have lots of friends talk to people join groups	understanding people leading others organizing communicating manipulating mediating conflicts	sharing comparing relating cooperating interviewing
INTRAPERSONAL LEARNER <i>"The Individual"</i>	work alone pursue own interests	understanding self focusing inward on feelings/dreams following instincts pursuing interests/goals being original	working alone individualized projects self-paced instruction having own space

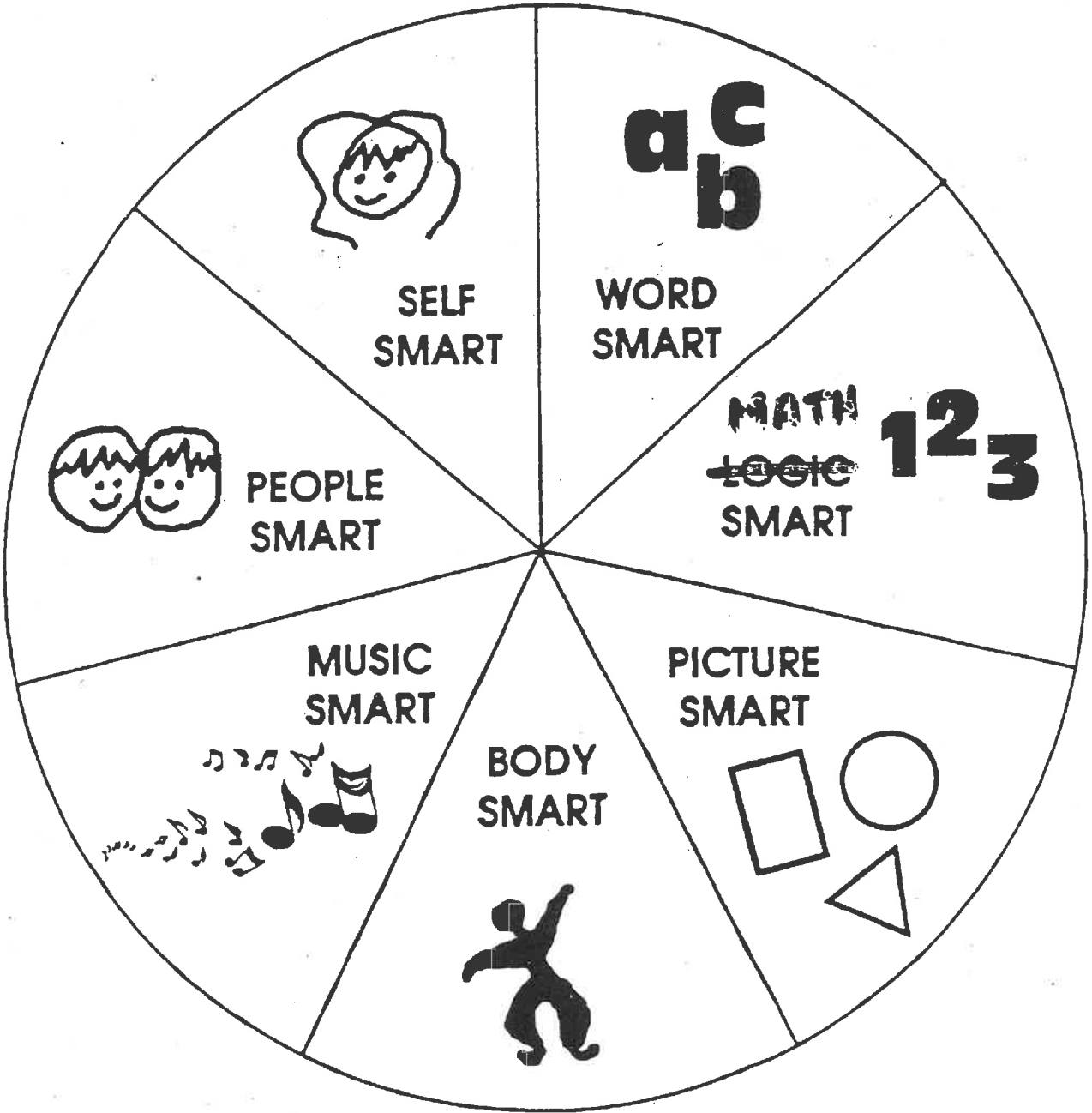


FIGURE 3.1

Seven Kinds of Learning Styles

Children who are strongly:	THINK	LOVE	NEED
Linguistic	in words	reading, writing, telling stories, playing word games, etc.	books, tapes, writing tools, paper, diaries, dialogue, discussion, debate, stories, etc.
Logical-Mathematical	by reasoning	experimenting, questioning, figuring out logical puzzles, calculating, etc.	things to explore and think about, science materials, manipulatives, trips to the planetarium and science museum, etc.
Spatial	in images and pictures	designing, drawing, visualizing, doodling, etc.	art, LEGOs, video, movies, slides, imagination games, mazes, puzzles, illustrated books, trips to art museums, etc.
Bodily-Kinesthetic	through somatic sensations	dancing, running, jumping, building, touching, gesturing, etc.	role play, drama, movement, things to build, sports and physical games, tactile experiences, hands-on learning, etc.
Musical	via rhythms and melodies	singing, whistling, humming, tapping feet and hands, listening, etc.	sing-along time, trips to concerts, music playing at home and school, musical instruments, etc.
Interpersonal	by bouncing ideas off other people	leading, organizing, relating, manipulating, mediating, partying, etc.	friends, group games, social gatherings, community events, clubs, mentors/apprenticeships, etc.
Intrapersonal	deeply inside of themselves	setting goals, meditating, dreaming, being quiet, planning	secret places, time alone, self-paced projects, choices, etc.

MULTIPLE INTELLIGENCES IN THE CLASSROOM
 Thomas Armstrong
 ASCD (1994)

LINGUISTIC INTELLIGENCE

- ⇒ sensitivity to the meaning of words, not only to their literal meanings but also to their shadings of meanings and to the interactions among them (semantic competence)
- ⇒ sensitivity to the order among words, including the capacity to follow grammatical rules as well as to know when it is appropriate to ignore them (syntactic competence)
- ⇒ sensitivity to the sounds, rhythms, inflections, and meters of words, thus to the musical interaction of words (phonological competence)
- ⇒ sensitivity to language's different functions, including its potential to excite, persuade, stimulate, inform, and please (pragmatic competence)

MUSICAL INTELLIGENCE

- ⇒ sensitivity to rhythm, or to the patterned movement of physical sound within a span of time
- ⇒ sensitivity to pitch (or melody), that is, to the consecutive tones of a particular rhythm, length, range, and register that make up a basic theme or tune
- ⇒ sensitivity to timbre, that is, to the characteristic qualities of a tone that allow us to distinguish the sound of a violin, say, from that of a flute, piano, or human voice

LOGICAL-MATHEMATICAL INTELLIGENCE

- ⇒ the ability to discern logical or numerical patterns
- ⇒ the ability to prosecute extended lines of reasoning or to skillfully handle increasingly abstract tiers of analysis

SPATIAL INTELLIGENCE

- ⇒ the capacity to manipulate or mentally rotate forms or objects perceived, that is, the ability to transform or to recognize the transformation of one element into another
- ⇒ the capacity to perceive forms or objects accurately and to recognize instances of the same element
- ⇒ the capacity to conjure up mental imagery and then to transform that imagery
- ⇒ the capacity to produce a graphic likeness of forms or objects perceived, even in the absence of the forms or objects
- ⇒ sensitivity to the tension, balance, and composition that characterize visual and spatial displays in the graphic arts and in many natural elements

BODILY-KINESTHETIC INTELLIGENCE

- ⇒ the capacity to handle objects skillfully, including both gross and fine motor movements
- ⇒ the ability to control one's bodily movements, that is, to use one's body in differentiated and skilled ways for functional or expressive purposes

INTRAPERSONAL INTELLIGENCE

- ⇒ the ability to develop a reliable working model of oneself, including one's desires, goals, anxieties, strengths, and problems, and to draw upon that model as a means of understanding and guiding one's behavior

INTERPERSONAL INTELLIGENCE

- ⇒ the ability to notice and make distinctions among other individuals, particularly among their moods, temperaments, motivations, and intentions and to act upon that knowledge

A. Maslow



Self-actualization

Esteem

Belongingness

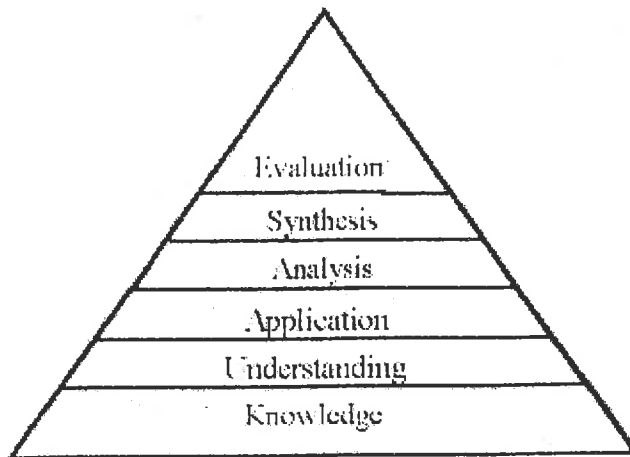
Safety

Physiological

**Hierarchy
of Needs**

Learning-Theories.com

Bloom's Taxonomy of Educational Objectives (1956)



In 1956, Benjamin Bloom headed a group of educational psychologists who developed a classification of levels of intellectual behavior important in learning. Bloom found that over 95% of the test questions students encounter require them to think only at the lowest possible level...the recall information.

Bloom identified six levels within the cognitive domain, from the simple recall or recognition of facts as the lowest level, through increasingly more complex and abstract mental levels, to the highest order which is classified as evaluation. Verb examples that represent intellectual activity on each level are listed here.

Knowledge: arrange, define, duplicate, label, list, memorize, name, order, recognize, relate, recall, reproduce, state.

Comprehension: classify, describe, discuss, explain, express, identify, indicate, locate, recognize, restate, review, select, translate,

Application: apply, choose, demonstrate, dramatize, employ, illustrate, interpret, operate, practice, sketch, solve, use, write.

Analysis: analyze, appraise, calculate, categorize, compare, contrast, criticize, differentiate, discriminate, distinguish, examine, experiment, question, test.

Synthesis: arrange, assemble, collect, compose, construct, create, design, develop, formulate, manage, organize, plan, prepare, propose, set up, write.

Evaluation: appraise, argue, assess, attach, choose, compare, defend, estimate, judge, predict, rate, select, support, value, evaluate

QUESTIONING FOR QUALITY THINKING

Knowledge — *Identification and recall of information*

Who, what, when, where, how ----- ?

Describe ----- .

Comprehension — *Organization and selection of facts and ideas*

Retell ----- in your own words.

What is the main idea of ----- ?

Application — *Use of facts, rules, principles*

How is ----- an example of ----- ?

How is ----- related to ----- ?

Why is ----- significant?

Analysis — *Separation of a whole into component parts*

What are the parts or features of ----- ?

Classify ----- according to ----- .

Outline/diagram/web ----- .

How does ----- compare/contrast with ----- ?

What evidence can you present for ----- ?

Synthesis — *Combination of ideas to form a new whole*

What would you predict/infer from ----- ?

What ideas can you add to ----- ?

How would you create/design a new ----- ?

What might happen if you combined -----

with ----- ?

What solutions would you suggest for ----- ?

Evaluation — *Development of opinions, judgments, or decisions*

Do you agree ----- ?

What do you think about ----- ?

What is the most important ----- ?

Prioritize ----- according to ----- .

How would you decide about ----- ?

What criteria would you use to assess ----- ?

Recalling

Who, what, when, where, how ----- ?

Comparing

How is ----- similar to/different from ----- ?

Identifying Attributes and Components

What are the characteristics/parts of ----- ?

Classifying

How might we organize ----- into categories?

Ordering

Arrange ----- into sequence according to ----- .

Identifying Relationships and Patterns

Develop an outline/diagram/web of ----- .

Representing

In what other ways might we show/illustrate ----- ?

Identifying Main Ideas

What is the key concept/issue in ----- ?

Retell the main idea of ----- in your own words.

Identifying Errors

What is wrong with ----- ?

Inferring

What might we infer from ----- ?

What conclusions might be drawn from ----- ?

Predicting

What might happen if ----- ?

Elaborating

What ideas/details can you add to ----- ?

Give examples of ----- .

Summarizing

Can you summarize ----- ?

Establishing Criteria

What criteria would you use to judge/evaluate ----- ?

Verifying

What evidence supports ----- ?

How might we prove/confirm ----- ?

Linguistic	Logical/ Math.	Spatial	Musical	Bodily/ Kines.	Inter- personal	Intra- personal

Gardner, Howard. *Frames of Mind: A Theory of Multiple Intelligences*. 3rd ed. Basic Books, 2011.

