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Part 2: The Backdrop of Learning and Teaching Theories

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Chapter 7: Theories of Teaching

Learning Principles from Stimulus Response Theory

Learner should be active, rather than a passive listener or viewer

Frequency of repetition is important in acquiring skill and for retention through over-learning

Reinforcement is important

Generalization & discrimination suggest the importance of practice in varied contexts, so that learning will become appropriate to a wider (or more restricted) range of stimuli

Learning Principles from Stimulus Response Theory (cont.)

Novelty in behavior can be enhanced through imitation of models, through cueing and shaping, and is not inconsistent with a liberalized S-R approach.

Drive is important in learning, but all personal-social motives do not conform to the drive-reduction principles based on food-deprivation experiments.

We must recognize and provide for the resolution & accommodation of learning conflicts & frustrations.

Learning Principles - Cognitive Theory

- Learning problems should be so structured and presented that the essential features are open to the inspection of the learner.
- The organization of knowledge should be an essential concern of the teacher or educational planner so that the direction from simple to complex is not from arbitrary, meaningless parts to meaningful wholes, but instead from simplified wholes to more complex wholes.
- Learning is culturally relative, and both the wider culture and the subculture to which the learner belongs may affect his learning.
- Cognitive feedback confirms correct knowledge and corrects faulty learning. The learner tries something provisionally and then accepts or rejects what he/she does on the basis of its consequences.
- Goal-setting by the learner is important as motivation for learning and personal successes and failures determine how individuals set future goals.

Learning Principles from Motivation & Personal Theory

The learner's abilities are important, and provisions must be made for slow, rapid, & specialized learners.

The learner must be understood in terms of the influences that have shaped his/her development.

Learning is culturally relative, and both wider cultures and subcultures may affect learning.

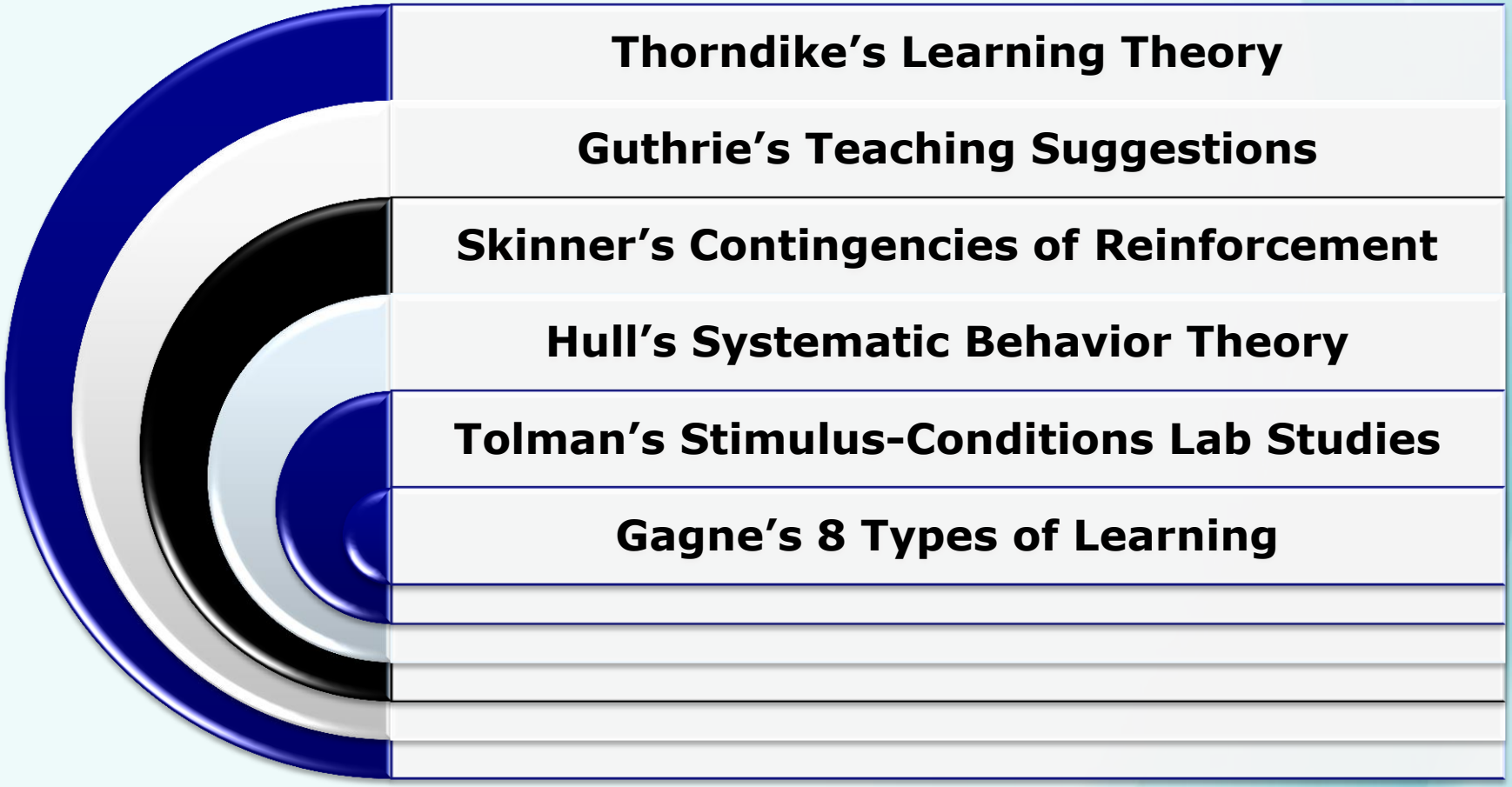
The group atmosphere of learning (will affect satisfaction in learning as well as the products of learning.

The same objective situation may tap appropriate motives for one learner and not for another.

The organization of motives and values within the individual is relevant.

The group atmosphere of learning will affect satisfaction in learning as well as the products of learning.

Learning Theories about Animals & Children



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Thorndike's Learning Theory

❖Teaching

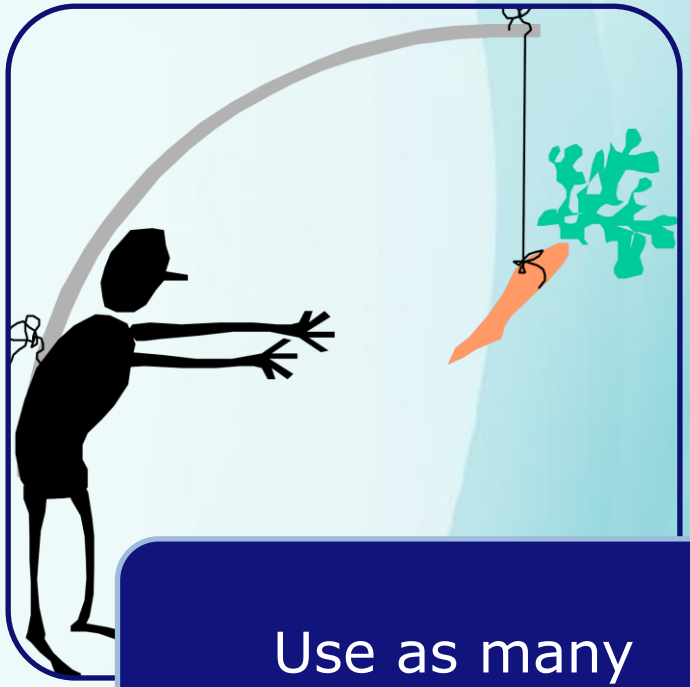
- The control of learning by the management of reward

❖Teacher's role

- Cause appropriate stimulus-response bonds to be built up in the learner's behavior repertoire
- Manipulate the learning situation (by using rewards) so that the learner will be
  - ✓Interested
  - ✓Problem-oriented
  - ✓Attentive

Guthrie's Suggestions for Teaching

Discover the cues leading to desirable/undesirable behavior



Use as many stimulus supports for desired behavior as possible

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Skinner's View of Teaching

- "Teaching is simply the arrangement of contingencies of reinforcement"

- Contingencies of Reinforcement
  - Relations which prevail between behavior and consequences

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Laboratory Studies of Learning

Hull's Systematic Behavior Theory

The development of habits & skills would proceed from the simple to the complex with a clear understanding of the stimuli and responses to be associated.

Tolman's Stimulus-Conditions Lab Studies

Teacher's task:

Create stimulus-conditions which make it possible for learner to perceive clearly what leads to what & to understand the different means by which a given goal can be reached

8 Types of Learning (Gagne)

1. Signal Learning

- The individual learns to make a general, diffuse response to a signal

2. Stimulus-Response Learning

- The learner acquires a precise response to a discriminated stimulus

3. Chaining

- What is acquired is a chain of two or more stimulus-response connections

4. Verbal Association

- The learning of chains that are verbal

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8 Types of Learning (Gagne) (cont.)

5. Multiple Discrimination

- The individual learns to make different identifying responses to as many different stimuli, which may resemble each other in physical appearance

6. Concept Learning

- The learner acquires a capability to make a common response to a class of stimuli that may differ from each other widely in physical appearance

7. Principle Learning

- A principle is a chain of two or more concepts; It functions to control behavior in the manner suggested by a verbalized rule

8. Problem Solving

- A kind of learning that requires the internal events usually called thinking

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8 Ways a teacher must manage the learner's environment (Gagne)

1. Presenting the stimulus
2. Directing attention and other learning activities
3. Providing a model for terminal performance
4. Furnishing external prompts
5. Guiding the direction of thinking
6. Inducing transfer of knowledge
7. Assessing learning attainments
8. Providing feedback

Teaching Concepts from Adult Learning Theories: Carl Rogers

❖Carl Rogers

- Role of teachers
  - ✓Facilitator of learning
  - ✓Developing personal relationship with the learner
- Key characteristics of teachers
  - ✓Genuine; Non-possessive, caring, prizing, trust, & respect; empathic understanding and sensitive and accurate listening

Rogers' Guidelines for Learning Facilitators

Convey a philosophy of trust in the group to set the initial mood or climate of the group experience	Elicit and clarify the purposes of the individuals and the group to help create a climate for learning	Use the individuals' drives and purposes as the moving force behind their learning
Make themselves a flexible resource to be used by the group	Accepts intellectual content & the emotionalized attitudes, giving each aspect the approximate degree of emphasis that it has for the individual or group	Make easily available a wide range of resources for learning
Gradually become a participant learner expressing his views as those of one individual only	Remain alert to strong individual feelings to try to understand each person's point of view	Recognize and accept his or her own limitations
	Sharing his feelings & thoughts with group as his "owned" attitude, not as a judgment	

Watson's Guidelines for Learning Facilitation

1. Behavior which is rewarded is more likely to recur.

2. Repetition without reward is a poor way to learn.

3. Threat & punishment commonly produce avoidance behavior.

4. How "ready" we are to learn something new is contingent upon factors, like:

A. Experience (we can learn only in relation to what we already know)

B. Relevance (we learn only what is appropriate to our purposes)

C. Freedom from discouragement, the expectation of failure, or threats to physical, emotional, or intellectual well-being

5. Material will remain un-learnable if we perceive it as un-learnable, irrelevant, or threatening

6. Novelty is generally rewarding.

Watson's Guidelines for Learning Facilitation (cont.)

7. We learn best that which we participate in selecting and planning ourselves.

8. Genuine participation intensifies motivation, flexibility, and rate of learning

9. An autocratic atmosphere produces apathetic conformity, various kinds of defiance, scapegoating, or escape in learners as well as increasing dependence upon the authority…

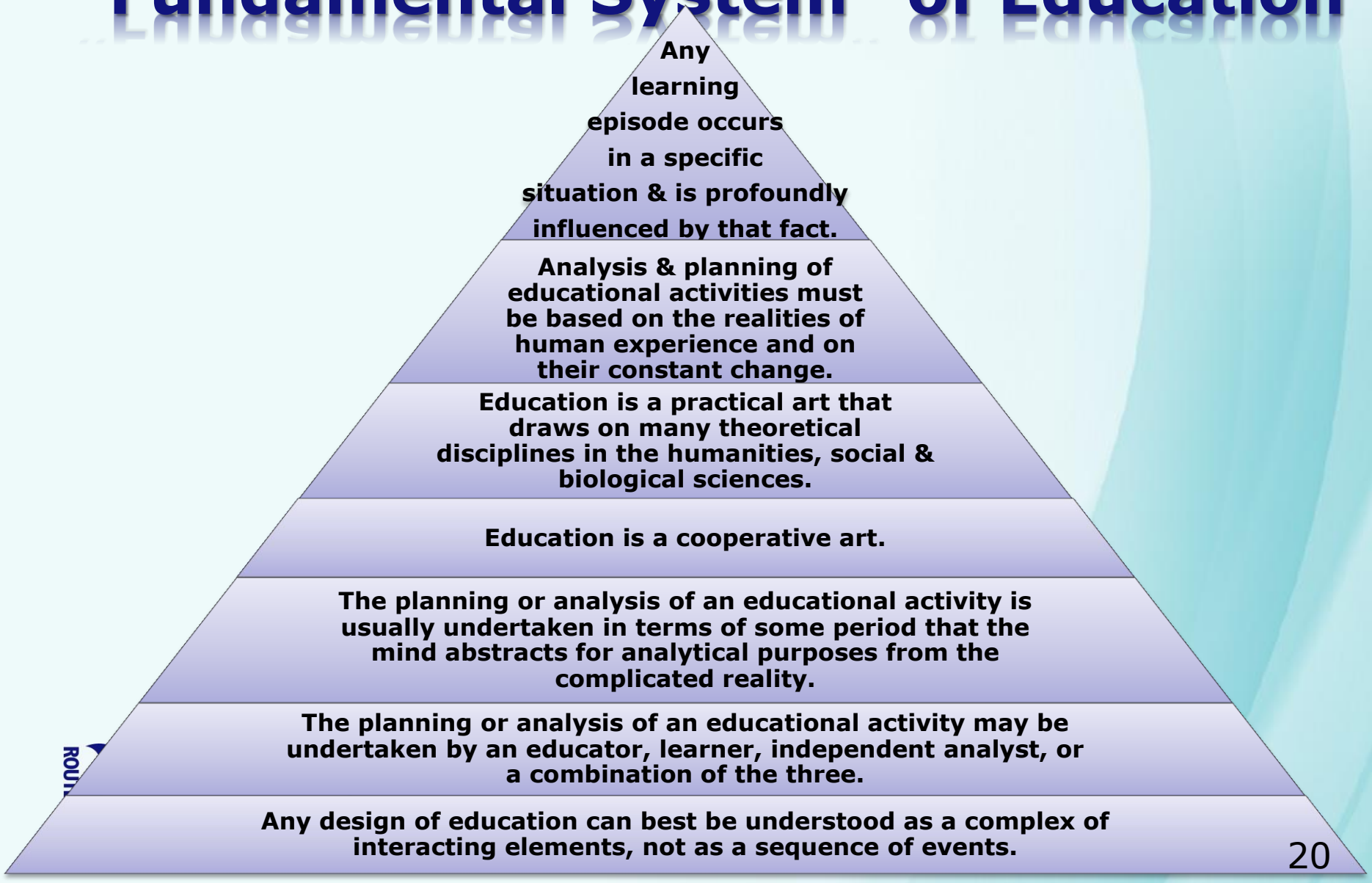
Watson's Guidelines for Learning Facilitation (cont.)

10. "Closed," authoritarian environments, characteristic of most conventional schools, condemn most learners to continuing criticism, sarcasm, discouragement, and failure so that self-confidence, aspiration, and a healthy self-concept are destroyed.

11. The best time to learn anything is when is to be immediately useful to us.

12. An "open," non-authoritarian atmosphere can, then, be seen as conductive to learner initiative and creativity, encouraging the learning of attitudes of self-confidence, originality, self-reliance, enterprise, and independence. All of which is equivalent to learning how to learn.

7 Assumptions of Houle's "Fundamental System" of Education



"Fundamental System" Components Managed by Educators

1. A possible educational activity is identified.
2. A decision is made to proceed.
3. Objectives are identified and refined.
4. A suitable format is designed.

- **Learning resources are selected.**
- **A leader or group of leaders is chosen.**
- **Methods are selected and used.**
- **A time schedule is made.**
- **A sequence of events is devised.**
- **Social reinforcement of learning is provided.**
- **The nature of each individual learner is taken into account.**
- **Roles and relationships are made clear.**
- **Criteria for evaluating progress are identified.**
- **The design is made clear to all concerned.**

5. The format is fitted into larger patterns of life.

- **Learners are guided into or out of the activity both at the beginning and subsequently.**
- **Life styles are modified to allow time and resources for the new activity.**
- **Financing is arranged.**
- **The activity is interpreted to related publics.**

6. The program is carried out.
7. The results of the activity are measured and appraised.
8. The situation is examined in terms of the possibility of a new educational activity.

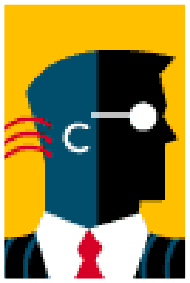
Tough's Characteristics of the "Ideal helper"

Warm & loving

- Accepts & cares about the learner's project/ problem
- Willing to spend time helping & showing approval, support, encouragement, & friendship
- Regards the learner as an equal

High regard for the learner as a self-planner

- Doesn't want to take the decision-making control away from them
- Confident in learner's ability to plan their own learning

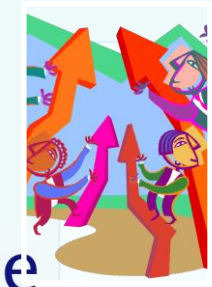


Views personal interaction with the learner as a dialogue

- Listens
- Accepts
- Understands
- Responds
- Helps

The helper's reasons for helping

- Affection & concern for the learner
- To gain as much as he or she gives
- Pleasure knowing he/she was helpful
- Satisfaction from seeing learner's progress
- Satisfaction from learner's gratitude



An open and growing person

- Is frequently a learner & seeks growth and new experiences
- Tends to be spontaneous & authentic
- Feels free to behave as a unique person

Dewey's Concepts

- Experience
- Democracy
- Continuity
- Interaction

Identification/Modeling Teaching Concepts

- Developed by Bandura
- Most elaborate system of thought or imitation
- Role modeling is the teacher's fundamental technique

New Systems of Thought

- **"Perspective Transformation"/"Critical Reflectivity"**
  - The value of teaching/learning as a tool to invoke critical thinking on the part of adults
- **Influencing the educative quality of total environments**

Reflection Questions

1. What is the wisdom behind Hilgard's 20 principles of teaching?
2. What ideas from Guthrie and Skinner (both behaviorists) make the most sense to you and why?
3. Using Robert Gagné's types of learning, classify your own learning when reading this chapter versus applying what you learned when instructing.
4. Summarize Carl Rogers' view of the teacher/learner relationship.

Reflection Questions (cont.)

5. How do you see teaching through *inquiry* and teaching through *modeling* as being useful?

6. Describe a transformational learning experience that you or someone you know has gone through.