Slides 1-2

- Reminders
    - Timed flashcard drill and Unit 1 exam
    - Thursday, January 20th

Slide 3

- Internal and disposition attribution
    - Birth order, family history, genetics, perceptual problems
    - Great teachers born, not made
    - Readiness
    - Applying labels
- External and environmental attribution

Slides 4-9

- Using behavioral effects to establish pseudo-causes, with help from labels
- Examples

Slide 10

- Academic child abuse: Situation where ineffective teachers put children at risk of school failure as a result of their own ineptitude

Slide 11

- Lack of training on how to best set the environment
- Data-oriented behavioral approach

Slide 12

- Reinforcement

Slides 13-

- Social advocates will often condemn the use of such rewards
- Constraint of individual freedom and expression
- Loss of motivation
- Bribery of children

Slides 16-19

- Elitism claim
- Type of children who succeed without educational system rewards
- What happens to the children who don't succeed
- True meaning of bribery
- Shortcoming on studies demonstrating detrimental effects of rewards

Slides 20-21

- Punishment
- Example

Slide 22

- Extinction

Slide 23

- Recovery

Slide 24

- Immediacy is critical
- Word decoding example

Slides 25-29

- Criticism Trap
- Using data to determine effect
- Results
- Assumptions

Slides 30-31

- Definition of Criticism Trap
- Why the trap works

Slides 32-36

- Escaping the Criticism Trap
- How to handle misbehavior
- Signal to praise appropriate behavior of others
- Supplemental punishment
- Caution

Slides 37-39

- Manipulated versus natural rates of praise
- Early grades: Energetic and love school/teachers
- High school: Apathetic and resent school/teachers
- Data on natural rates
    - First and second grade
    - After third/fourth grade
    - By high school
- Where does reinforcement come from?

Slide 40

- Shaping: Providing reinforcement as someone's behavior gets closer to a goal (and extinguishing behavior that's further away)
- Stimulus generalization: Behavior become more probable in the presence of one stimulus due to being reinforced in presence of another stimulus
- Stimulus discrimination: Behavior occurs in the presence of some stimuli and does not occur in the presence of other stimuli

Slide 41

- Conditioned stimulus (CS): Stimulus that elicits a response due to that stimulus being paired with another stimulus
- Conditioned response (CR): Response that is elicited by a conditioned stimulus (CS)
- Higher-order classical conditioning: The process of creating a new CS by pairing a neutral stimulus with another CS

Slides 42-43

- Good Behavior Clock for classroom management
- On why behavior management alone may not be enough

Slide 44

- Usual sources of blame
  - Child
  - Culture at large
  - Socio-economic reasons
- Traditional key for fix
  - Restructure school
  - Pay teachers more
  - Higher standards
- Almost no focus on instructional content or methods
- So, what does work?

Slides 45-48

- Race riots of the 1960s
- President Johnson's War on Poverty
- Head Start initiative
- Bereiter-Engelmann Preschool

Slides 49-50

- 1967: Project Follow Through
- Most expensive experiment in education ever funded
- Ignorance of this landmark research

Slides 51-57

- Evaluation of models in basic skills, cognitive/conceptual skills, and affective measures
- Examples of various models

Slides 58-61

- Results
    - Reading, Math, Spelling, Lanaguage
    - Comparison of model categories
- More results
    - Basic skills, cognitive, and affective
    - Comparison of model categories

Slides 62-64

- Lasting effects of Direct Instruction kids in PFT
- Economic decisions
- Rationale for funding decisions

Slides 65-68

- Michael article
- Behavior analysis of college teaching and student study behavior
- Analysis meant for typical college class
- Two-for-one rule

Slide 69

- Motivating study behavior
    - Intrinsic interest
    - Payoffs
    - Grades

Slide 70

- Grade must matter to the student, otherwise no other way to motivate
- Still should not blame the rat

Slide 71

- Three features that must be present in order for students to study hard:
    - The grade must be important to the student
    - The *exam/assignment grades* must be closely (and explicitly) linked to the *course grade;* and
    - *Studying* must be closely (and explicitly) linked to the *exam/assignment grades*

Slides 72-73

- Criticism: This type of course does not teach creativity or new knowledge, but only teaches students how to ***parrot*** back old knowledge.
- Creativity requires an extensive familiarity with what is already known - an extensive knowledge base about which one can be creative.

Slide 74

- One problem with intrinsic interest
- Probably satisfied with much less contact than required to master the material enough to pass classes

Slide 75

- Another problem with intrinsic interest
- Competing activities (that are also intrinsically interesting) often can't be postponed, whereas studying can be

Slide 76

- Weakness of long-range payoffs
- It is easy to believe that you can contribute to the human condition - that is, be a successful behavior analyst - without understanding the specific details of the study assignment

Slide 77

- Grades are the only motivational factor over which the instructor has control
- Therefore, instructor should focus on using grades to promote effective studying

Slide 78

- Michael distinguishes between “vicious” and “friendly” competition, and agrees that “vicious” competition is, indeed, bad, but “friendly” competition is not.
- Norm-referenced grading practices produce vicious competition and hence should not be adopted, while criterion-referenced grading practices produce “friendly” competition which is OK.

Slide 79

- With norm-referenced, the grade you receive depends not only on your grade but the grades of other students in the class; if one student does well, it decreases the opportunity for another student to do well
- There is no rational reason to help others under this set of conditions

Slide 80

- With criterion-referenced, the grade you get depends only on your grade, not on the grades other students get; thus when one student performs well it does not decrease the opportunity for another student to do well

Slides 81-84

- The universal problem: procrastination
- Analysis of the procrastination scallop
- The relationship between task completion and time passage causes the scallop

Slide 85

- To have completed most of the task and have a good deal of time left is “safe” or “nonaversive”
- But to have completed very little of the task and have very little time left is a condition that is dangerous or “aversive”

Slides 86-89

- It is the aversiveness that generates escape behavior
- Studying behavior decreases the existing aversiveness
- Diagramming the escape contingency involved in the procrastination scallop
- Notice that the aversiveness increases as time passes if you fail to study

Slide 90

- Why does an end-of-course activity (like a final exam or paper worth 50%-75% of the student's grade) weaken the relation between the *exam* grades and the *course* grades?

Slides 91-93

- Are we just spoon feeding the students?
- One reason to not give student objectives
    - Without specification you will learn all of the other things you wouldn't learn if you didn't know what was going to be on the exam
- Another reason to not give study objectives
    - Part of the scholar's repertoire consists of bringing order out of chaos

Slide 94

- Review of 200 studies on critical variables in effective classrooms

Slide 95

- What controls attendance?

Slides 96-102

- Infrequent exams cause you to procrastinate and build up an unreasonable amount of material to study
- Patterns of behavior under different exam frequencies
- Infrequent exams will also cause you to gamble

Slide 103

- Why, according to Michael, learning will never be fun and easy?

Slides 104-106

- Traditional Use of Flashcards
- Being right during practice is not enough
- Construction criteria:
  - Questions on front
  - Your response on back
  - Keep backs brief
  - If questions complicated, break into multiple cards

Slide 107

- Avoid exotic / unusual / unique words on front
  - If unique required, use across multiple cards
- Replace any tears, smudges, or other unique elements that hint at answer

Slide 108

- Nonexample
- FRONT OF CARD
    - Despite the popularity of the brain amine theory of depression, marked reductions of _____ does not produce depression in humans according to E. Valenstein in Blaming the Brain
- BACK OF CARD
    - Neurotransmitters such as norepinephrine and serotonin

Slide 109

- Example
- FRONT OF CARD
    - Reducing _____ did not produce depression
- BACK OF CARD
    - norepinephrine and serotonin

Slides 110-117

- **S**ay – the learner should say the response out loud
- **A**ll – work with entire set of cards at once
- **F**ast – use timed sessions and work through cards as fast as possible
- **M**inute – use brief timings (minute, 30 seconds, etc)
- **E**very –
- **D**ay – do brief timing at least once a day
- **S**huffle – shuffle cards to be in random order

Slide 118

- SAFMEDS test will only assess the 22 pre-made SAFMEDS cards
- But recommend you apply SAFMEDS technique to your own studying of the study objectives

Slide 119

- All these myths have been disproved through research on the use of SAFMEDS
    - Actively saying leads to better learning
    - Working with the entire set leads to better learning
    - Sequence practice teaches order, not relationship
    - Faster learning rates occur with faster practice
    - Errorful approximates real world
    - Understanding comes after learning