Slide 1

Unit 8

Performance-Based Instruction, systems analysis, reform, and obstacles

Slide 2

On-the-job training

PBI: new job, new set of tasks, changes in existing tasks, cross-training

Slide 3

Beginning with a checklist

Design checklist on the spot (even if exists)
Point to criterion ("What's your best guess about why we have that criterion?")
Starting with evaluation / modeling / open feedback

Slide 4

Basic PBI Procedure

- Begin with evaluation of performance, clarify good products (task clarification)
- Trainee "coaches" the trainer
- Trainer coaches trainee (GO)
- Trainee practices with coaching (GP)
- Demonstration of mastery
- Keep monitoring quality of performance on the job (frequent disconnect)
- Continue coaching as needed

Slide 5

Guided Observation

Identify characteristics of:
Good vs. poor products
Good vs. poor results
Good vs. poor processes
Markle / rule fluency / job aids

Examples:
"I want you to tell me whether I've done a good job."
"This time, I want you to tell me exactly what to do to fill this order."

Slide 6

Guided Practice

Practice doing task that accomplish real work
Fading

Example:
"This time, you fill the order. I won't say anything unless you are about to do something dangerous. When you finish, we'll talk about how well you did."

Slide 7

Demonstration of Mastery

Demonstrate can perform specific tasks and job as a whole

Example:
"I'll do one and you do the other. We'll meet at the check-out stand."

Slide 8

Level of mastery criteria

Workplace demands / skill levels (caution)

Slide 9

Handing off to experts

Speed and shortcuts
Novice risk
Experts often need training in training

Slide 10

Systems Analysis intro

Goals, designs, and management of
Broad organizational
Process that cut across jobs
Individual job roles and performers
Interconnectedness
Who reinforces the person in charge of reinforcement?

Slide 11

Used on the job

Training / realities & demands of workplace

Slide 12

Minimize “nice-to-know”

Emphasize “use-it-now”
Learner products during training should match work products
Even better to have training environment match workplace environment
Have observation, practice, and mastery demonstration actually take place on the job

Slide 13

Workplace support

Form linkages between training and job itself formed by partnering with those in workplace (not by sitting in designer's office)

Slide 14

Connecting workplace evaluation and training evaluation

Instructor receives regular and systematic information on performance of past students?
Both learners and instructors need clear feedback

Slide 15

Key Linkages

- Goal or mission
- Inputs: Training content
- Training processes
- Learner products
- Feedback during training
- Workplace support*
- Workplace feedback*

If training truly linked, will be supported until goals / strategies change

Slide 16

Effective reform require systemic change

Schools as an organizational system, part of a system, and containing multiple systems (educational system, individual school system, 3rd grade class system)
Some parts: publishers, colleges of education, professional groups, unions
Cannot target a single aspect of system(s)
Major changes in policies and practices across the board

Slide 17

Two main games for installation

First: Carefully install data-supported practices
Second: Internal quality-control (frequent and specific monitoring)

Slide 18

Assessment

Central to quality control is the need for assessment
Documenting both problems and success / accurate and specific
Timely identification with timely and effective responses (NCLB01)

Slide 19

"Teachable"

Practicality of program
Average teacher / reasonable training / present it so all learners meet projections

Slide 20

Accoutability

Responsible-accountable:
Teacher → students
Principal teachers and students
Trainer principals, teachers, students
Assistant superintendent trainers, principals, teachers, and students

Slide 21

Fragmented responsibilities

Principals who works for 3 or 4 different assistant superintendents

Slide 22

Responsible-accountable is more than pinning blame

Teachers who meet projections (EOM note) / rewarded individually / recognition / monetary incentives
Those who exceed should receive additional incentives

Slide 23

Principals and trainers too

Base salary contingent on students who meet or exceed expectations

Slide 24

If produce academic child abuse

Teachers, principals, and trainers / reassigned or fired if fail to achieve minimum performance standards

Student-referenced system

Slide 25

Teacher-training institution

Failure of colleges of education
School system does own training
Notice of insufficient training

Slide 26

Programs must be proven

No installation with demonstration of effectiveness
Experimentally tried out with several teachers
If fails to achieve, immediately terminated (often violated)

Slide 27

Philosophy before fact

Task for behavioral educators:
1st: Develop effective instructional strategies (done)
2nd: Disseminate strategies (not done)
We know what's needed, now need to overcome obstacles
Educators do adopt new procedures (e.g., whole language)but don't adopt behavioral approaches
More importantly, rarely demand evidence of effectiveness of
Educators pay little attention to idea of using evidence-based approach
Largest experiment in the history of instructional methods has had no impact on daily classroom practices

Slide 28

Disregard for data

Not just ignore, but actively discourage research / California law (1976) that instructional materials must be tried out and revised based on student errors before adoption
The California Board of Education (1988): "…is not to be considered as part of the criteria for recommending materials to the State Board of Education."

Data is more than just meaningless numbers and formulas

Slide 29

Careful inattention to detail

Physicist Richard Feynman (1985) / served on a commission of California State Board of Education to evaluate textbooks / math textbook
Six out of 10 members gave rating "above average"

Slide 30

Why just blaming publishers is shortsighted

Slide 31

Lack of frequent assessment = neglect

1991: FL, AL, NC, LA
Associate State Superintendent: "We've all been led to believe we were above average."
Information on performance lacking / Academic child neglect
"There is no requirement to do anything with the data – just receive it from the publisher."
1985 Math Framework: basis for teaching math during 1985-1991 / teaching for understanding / "whole math"
State decision makers
If didn't: international irresponsible-administrators award
If did: academic-child-abuse award
1987 assessment?
1985 draft even referred to as model by 1990 draft

Slide 32

Discipline and practice

Approaches require discipline and practice are to be avoided
Part of myth that the best learning is easy and fun
Fun: result of learning, fluent performance
Stressful / painful: process of learning

Slide 33

Colleges of education

Monopoly on training teachers
Produce disguised sorting-machine philosophies ("I want kids to be themselves and choose what they want to learn. I don't want to manipulate them."
Even teachers with right attitudes are never exposed to effective models
When they do hear, it is distorted

Slide 34

Behavioral Approaches

Declared mechanists, manipulators, and people who challenge the natural order of things
Advocates of skill-based instruction consider primates who are ignorant of educational advances
"Grunt and spit"

Slide 35

Skill-based instruction

Emphasize specific skills and careful attention to detail
Called misguided

Slide 36

General principles

Teachers should just be equipped with general principles (similar to students)
Teacher is a sensitive guide

Slide 37

Never given details

Trained on: Writing of lesson plans, assessment of intelligence, stages of maturational developments, and a little about motivation
Some teachers do improve delivery of presentation over time / become more popular / improved performance does not necessarily follow

Slide 38

Most important ingredient

Well intentioned with a good liberal arts background (look at college of education curriculum)

Slide 39

The problem of tenure

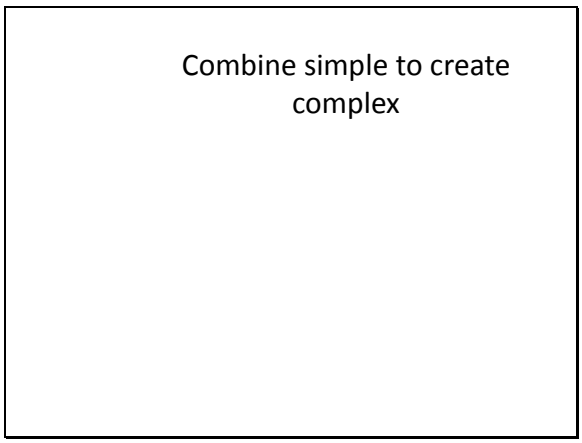
Problem mainly one of philosophy, bestowed upon those training to be teachers and school administrators
Unproductive faculty are permanent fixtures
New faculty require vote of old faculty
Self-perpetuating problem

Slide 40

Assembly line

Technological approach to instruction is "low level" and "misguided pursuit based on industrial model"
Systematic attempts design curricula or training straight from auto assembly line
"Control performance patterns of teachers, who, in turn, can control performance of students" is derided
"Failure to distinguish between education and training" "between school and factory"
Rhetoric: good guys educate, bad guys train
Opponents basic game: equate behavioral / evidence-based with machine, inhuman, repetative, and uninspiring language

Slide 41



Simple parts (skills and concepts)
Complex parts (applications that cut across previously taught skills

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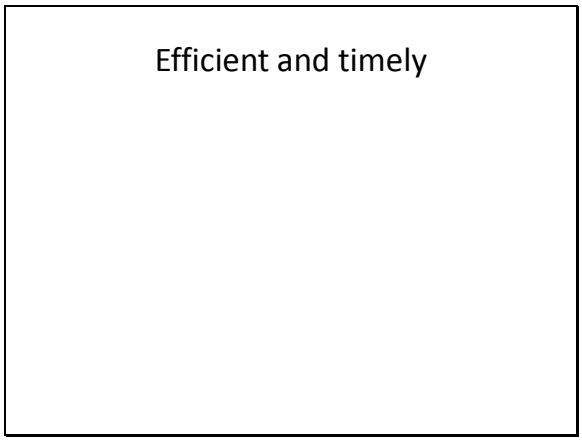

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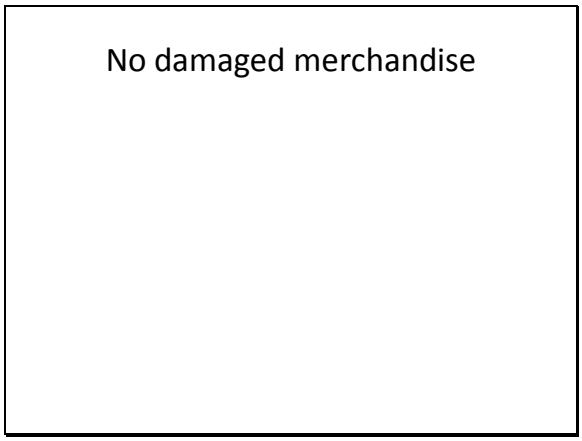

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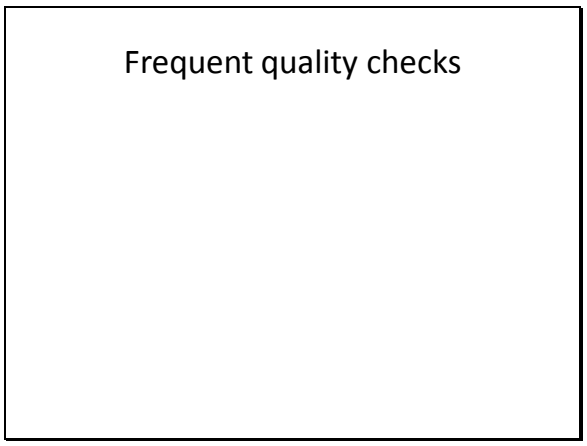

Inspection stations / identify problems early (not after entire product assembled)
Worker on line makes basic quality-control decisions

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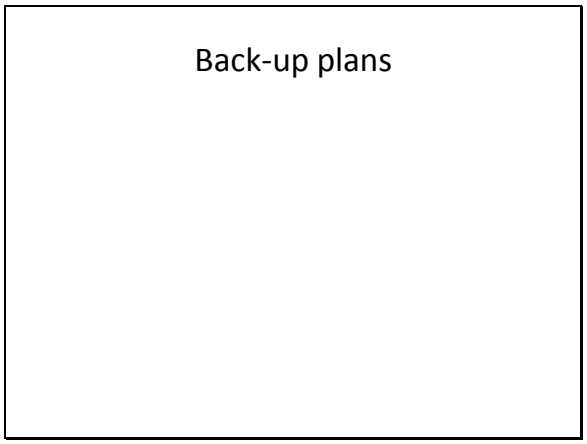

Anticipate problems / if machine breaks down / back-up plan

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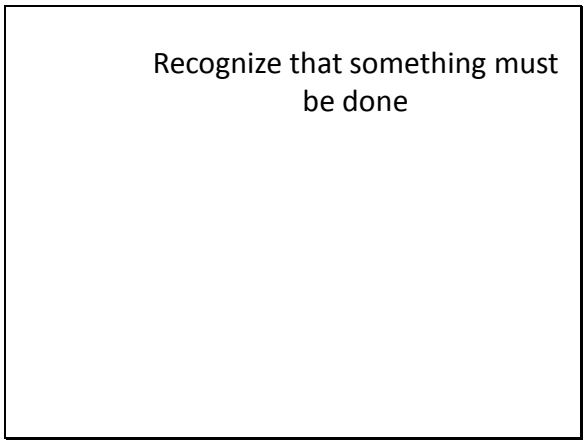


Educators are naïve about achieving results, but they are in charge of reform
Claim that given more money and resources, can fix problems (despite having never done it in past)

Slide 47

"Reform"

Slide 48

Core never gets tampered with

The basics of good instruction is never addressed

Slide 49

Illegal opposition

Achievement scores for averaging by teacher, by subject, and by school
Averages by district released to public
Public property and illegal to hide
Try to find which second grade teacher produced highest achievement
Afraid of rush by parents
Rather than use info to reward, retrain, and help; bury accomplishments
Legality and enforcement
Suit against State Board of Education, Department of Education, and Curriculum Commission
Tried of making up rules as went along
Won

Slide 50

Public ignorance

Boards just had to jump through a few more hoops
Process is more visible
Legislator and newspaper reaction to suit
State decision makers not run out
No laws exist to combat academic child abuse

Slide 51

Failure of behavior analysis

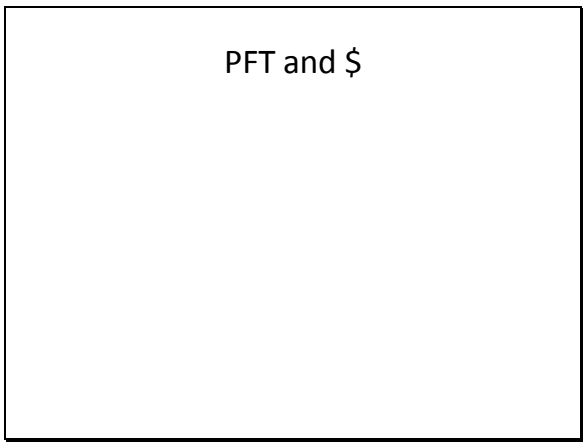
Association for Behavior Analysis, Association for Direct Instruction, Standard Celeration Society
Never directly approached
Council for Exceptional Children
Dissemination: professional journals and presentations at meetings
Purchase of math textbooks / attractiveness of art

Slide 52

Money

Invest more funds / without first installing brought and paid research
Kill educational program with federal grants (dependency)

Slide 53



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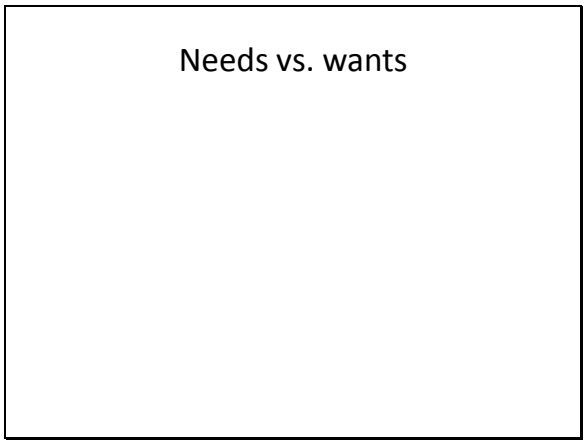
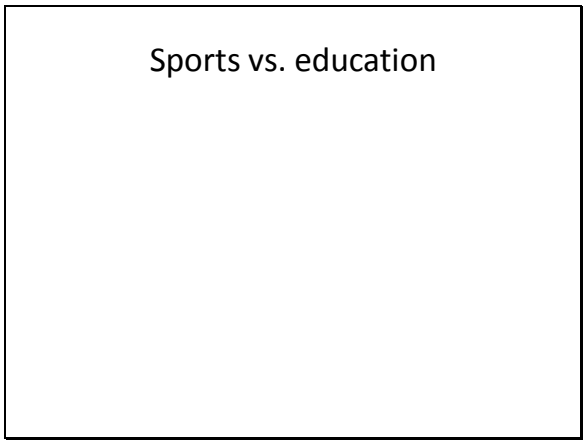


Learning vs. entertainment

Slide 55



Drive / daily gymnastics or swimming / daily mathematics or computer practice
Regular daily coaching and practice: athletics vs. academics (scoring)
Posting personal performance scores
Athletics teaching is accountable, academic teaching is not
Entertainment trumps education

Slide 56

Sesame Street

Nice, multicultural, politically correct child entertainment
No viewer performance, yet pretends to educate
Designed by entertainers (credits)
No problem if seen for what it is
Awards for education and speak of its educational value

Slide 57

Basic restrictions if significant reform is to follow:

1. Don't install any practice or reform unless you have substantial reason to believe that it will result in improvement of student performance
2. Don't install any approach without making projections about student learning
3. Don't install any practices without monitoring it and comparing performance in the classroom with projections
4. Don't install an approach without having a back-up plan
5. Don't maintain practices that are obviously not working as planned
6. Don't blame parent, kids, or other extraneous factors if the plan fails

Slide 58

Solutions

Private, for-profit learning centers with guarantees

Slide 59

Align administration's interests with kids

Administrators must suffer when the kids fail
Expect resistance from those benefiting from status quo
Serious threat to administration: "Oh, please reform our school system so that you can fire us."

Slide 60

Small scale tryout

Although more humane than district-wide, still should not be guinea pigs
Limit number of tryout programs
Back-up plans for failure

Slide 61

Don't test with best

Distorted view of what level of training and monitoring is needed

Slide 62

Pull the plug criterion

Set for different time periods
May start out great and then falter seriously
Leave students all year long and then conclude

Slide 63

Nuisance

Write and call
Confront decision makers
Open, public meetings in which proposals and policies adopt
Public doesn't show or discuss something other than instruction

Slide 64

Political institutions

Make loud enough noise, the school will respond
Could not get away with so much if informed public called them out on issues

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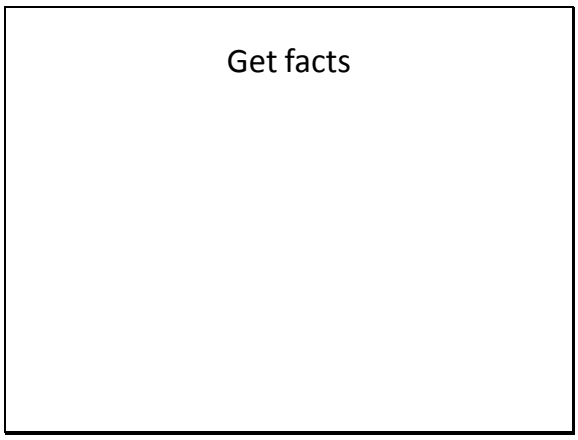

What instruction is being used
Principal may not know
If enough people are asking

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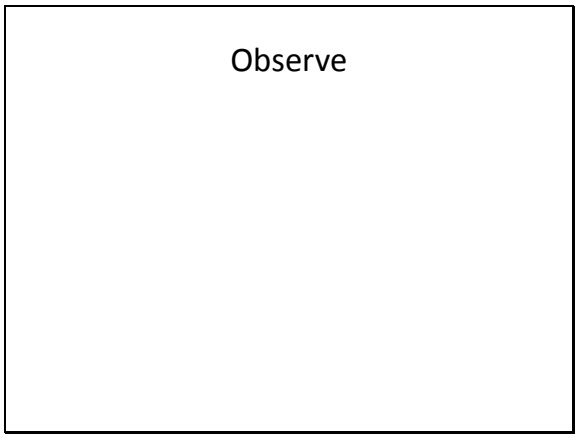

Spend a morning and take notes
See what's happening

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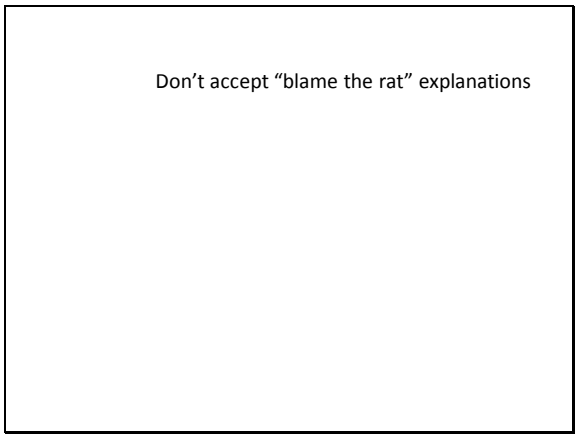

Fault: decision makers
Myths: dyslexia, perceptual handicapping, mysterious "growth rates"
Real in sense that there is obvious confusion
Myth is that kid is to blame

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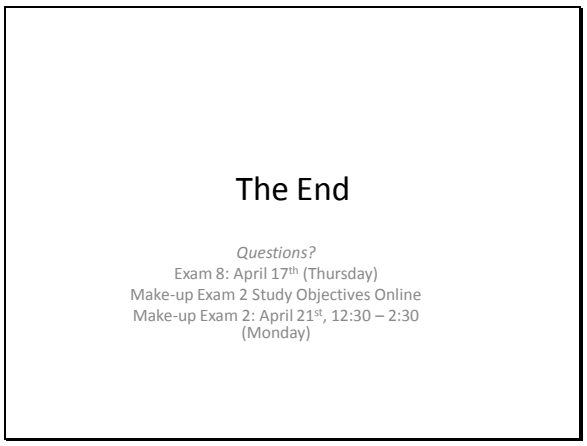
The End
Questions?
Exam 8: April 17th (Thursday)
Make-up Exam 2 Study Objectives Online
Make-up Exam 2: April 21st, 12:30 – 2:30 (Monday)