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2005

The Personalized System of Instruction (PSI), or Keller Plan, Thirty Years Later

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Fuller, Robert and Winch, David, "The Personalized System of Instruction (PSI), or Keller Plan, Thirty Years Later" (2005).

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AAPT Summer Meeting, 2005

(overhead slides of the presentation)

**The Personalized System of Instruction
(PSI),
or Keller Plan
Thirty Years Later**

by

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What Are the Essential Features of PSI ?

- **individually, self-paced - flexible pacing**
- **mastery based**
- **repeatable testing**
using proctors, for immediate feedback
- **peer tutoring**
- **stress is placed on the written word**
explicitly stated behavioral learning objectives
on-demand course content
- **lectures for motivation (or abandoned)**
not for critical information

Spread of PSI in Physics

- **Initial paper: Fred S. Keller**
“Good-bye Teacher...” J. Applied Behavior Analysis 1, 78-89, 1968.
- **Summer, 1971 – AAPT talks**
AJP article by Ben Green
“Teaching Physics by the Keller Plan at MIT” AJP, 39, 764- 775, 1971.
- **Fall, 1971 and beyond, Keller Plan workshops**
ERC, MIT
- **Center for Personalized Instruction**
Georgetown University
- **film PSI: An Alternative – UNL, 1972**
“A Guide to What, How, Why and Why Not of PSI”
- **CBP Modules, 1975 – sold to physics teachers**

Was PSI any good?

- Over 350 studies between 1924 and 1965 –no difference in college student learning, no matter what the teacher did.
- **PSI results –WOW!**
 - 28 out of 28 independent comparisons favored PSI using student performance of course exams!

T.C. Taveggia, *AJP* 44, 1028-33, 1976

PSI favored significantly:

- End-of-course - 34 out of 39 studies
- Retention of course content – 9 out of 9 studies
- Transfer of knowledge – 4 out of 5 studies
- Overall evaluation – 7 out of 9 studies

Kulik, Kulik & Smith, *Prog.Learn. & Ed. Tech.*, 13, 23-30, 1976

Why has it disappeared from physics?

- **Institutional reasons**
 - flexible pacing - incompatible
 - reward system for faculty
 - reward system for average students
- **Personal reasons**
 - more work
 - no external reward for improvements in student learning.

Message for today

- **Focus on student behaviors**
- **Provide frequent, repeatable, immediate feedback**
- **Offer a positive learning environment**
- **Provide information on-demand**