



HARVARD

GRADUATE SCHOOL
OF EDUCATION



Technology and the Teacher: Moving from Player Piano to Jazz Combo

John Richards, Ph.D.
richards@cs4ed.com



Question:

What Does a

- 1-1
- Networked
- Digital Curriculum

Classroom Look Like?

How is Learning Different?

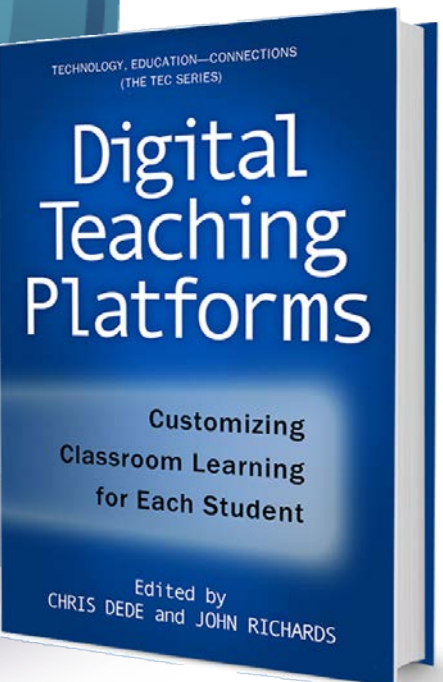


HARVARD

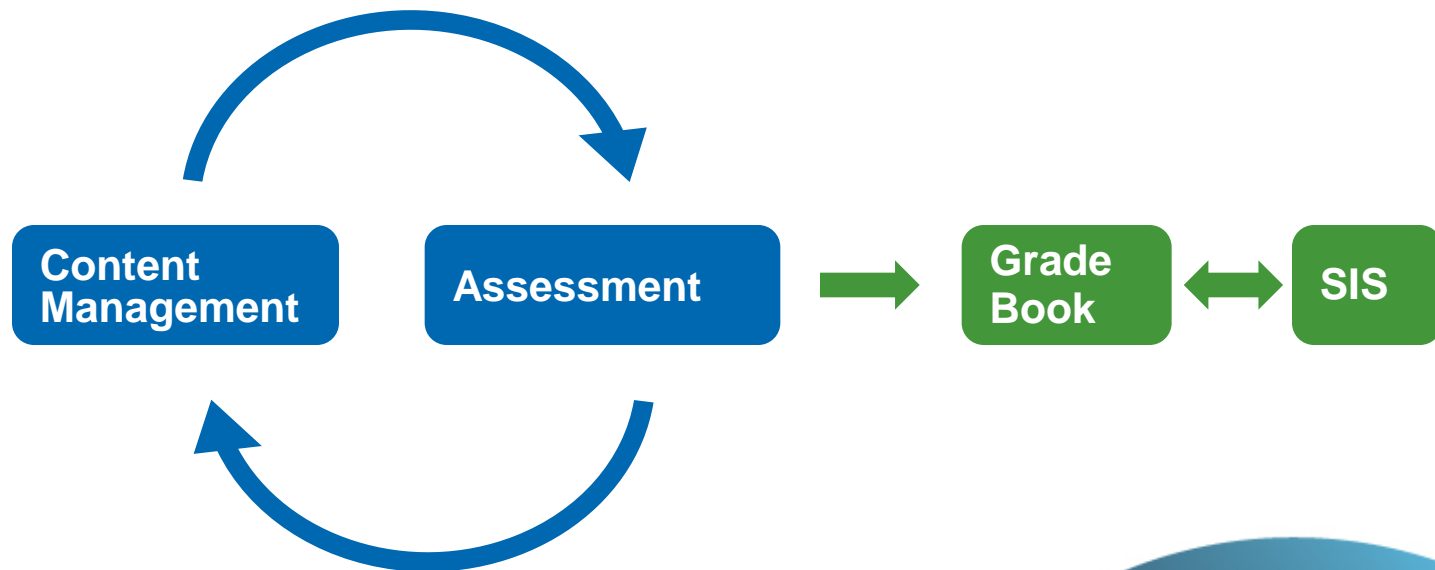


GRADUATE SCHOOL
OF EDUCATION

Digital Teaching Platforms



Traditional LMS Instructional Loop





Traditional LMS

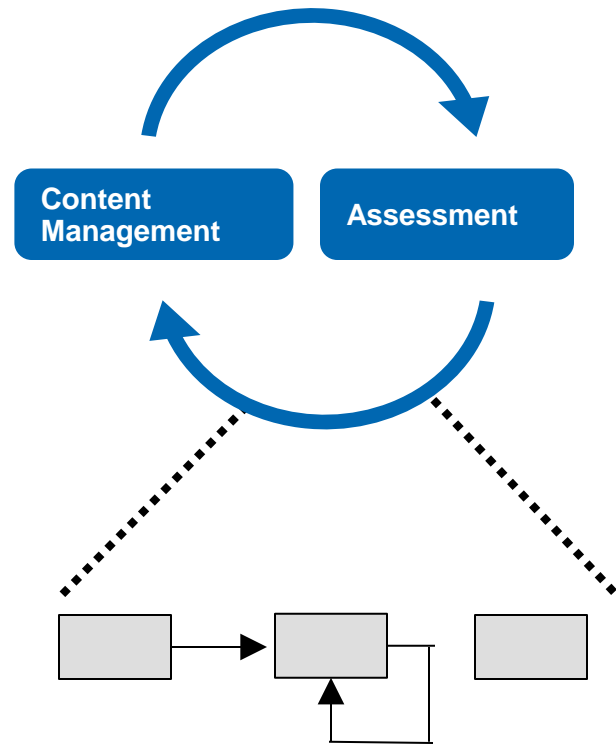
Skinnerian Teaching Machines—ILS's

- “Teacher Proof” Technology
- Closed Curriculum
- Fixed Map from Assessment to Curriculum
- Lab or Back of the Room
- One student only

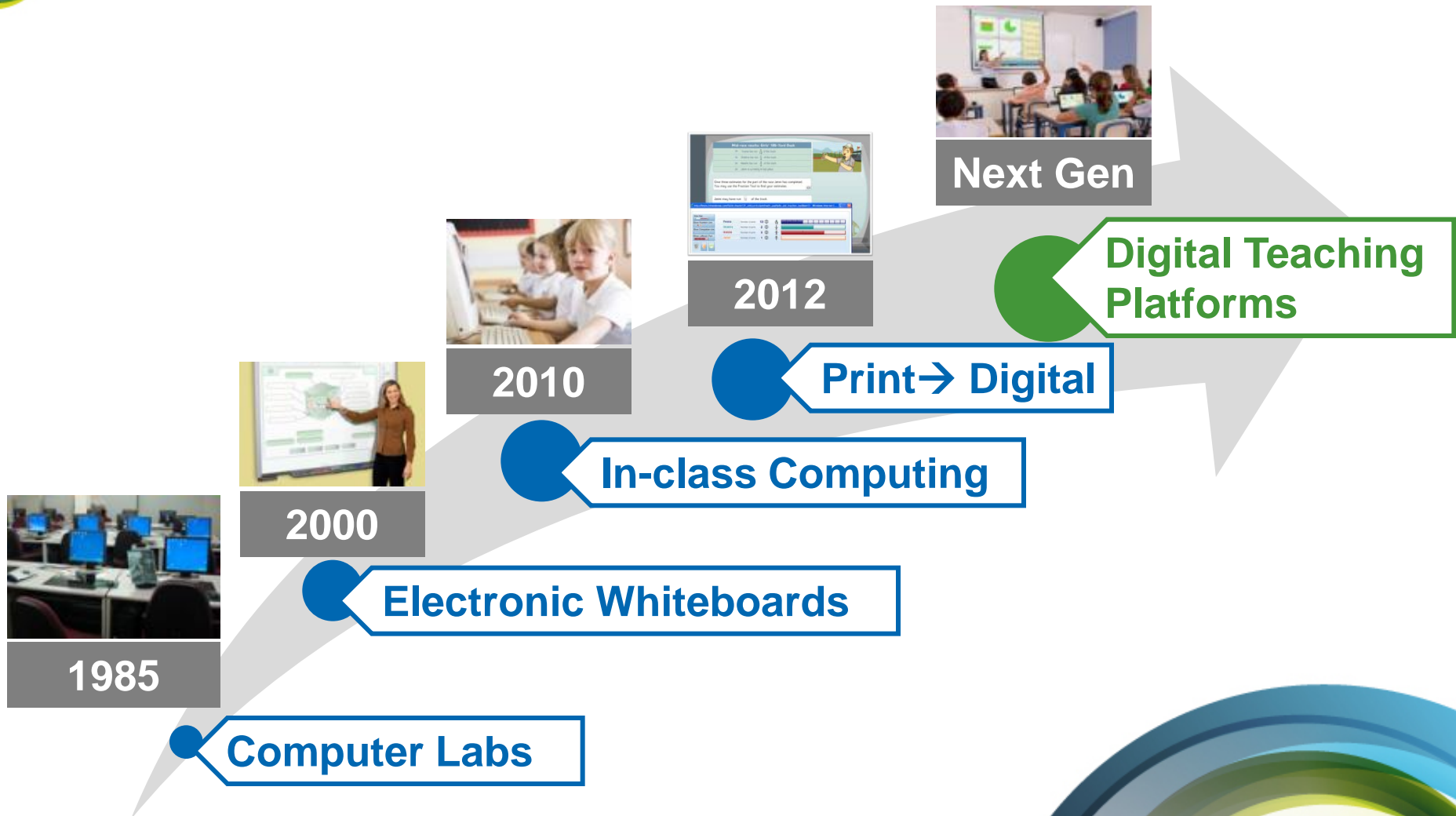




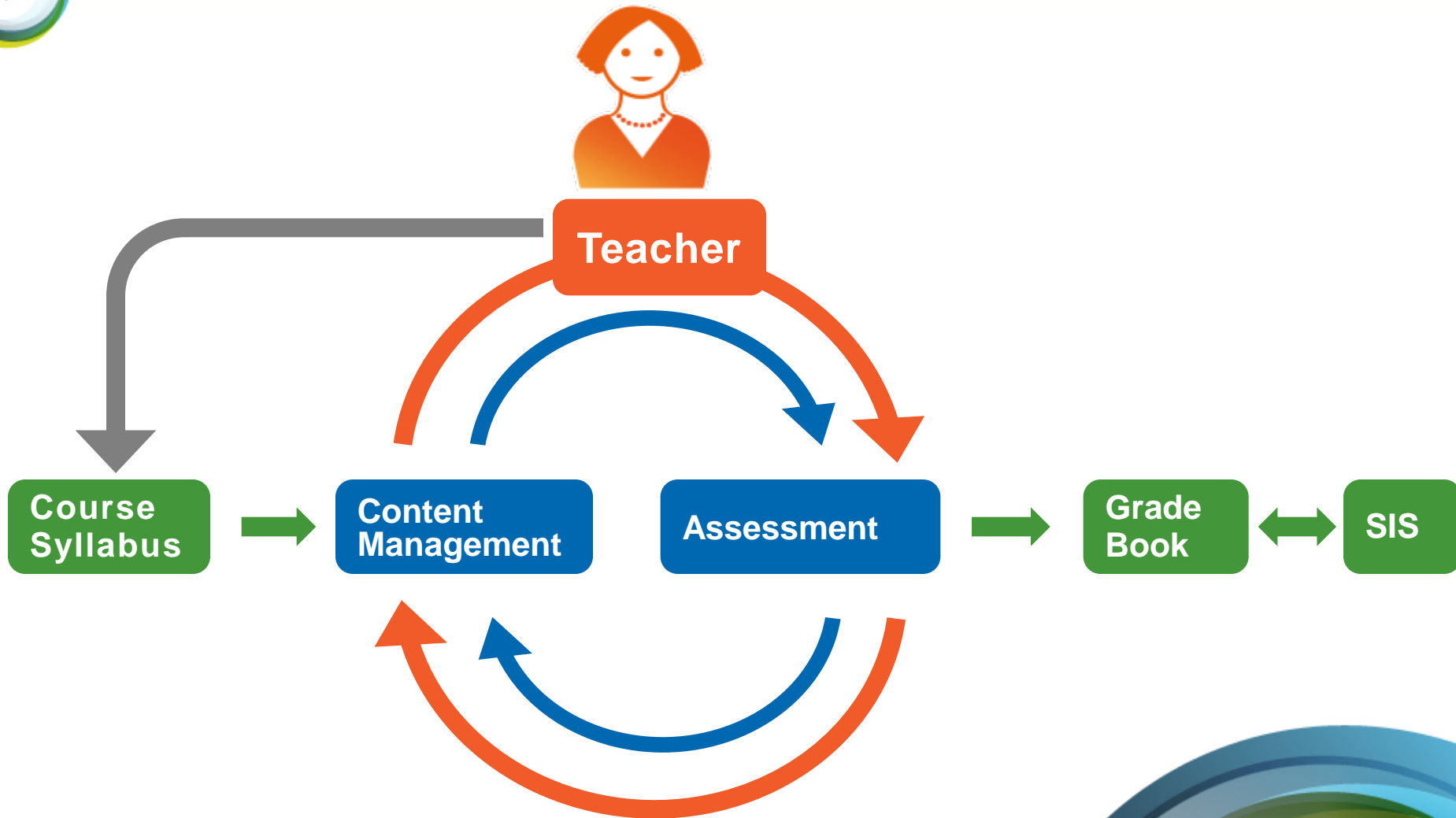
Quasi-Summative (Boxcar) Model



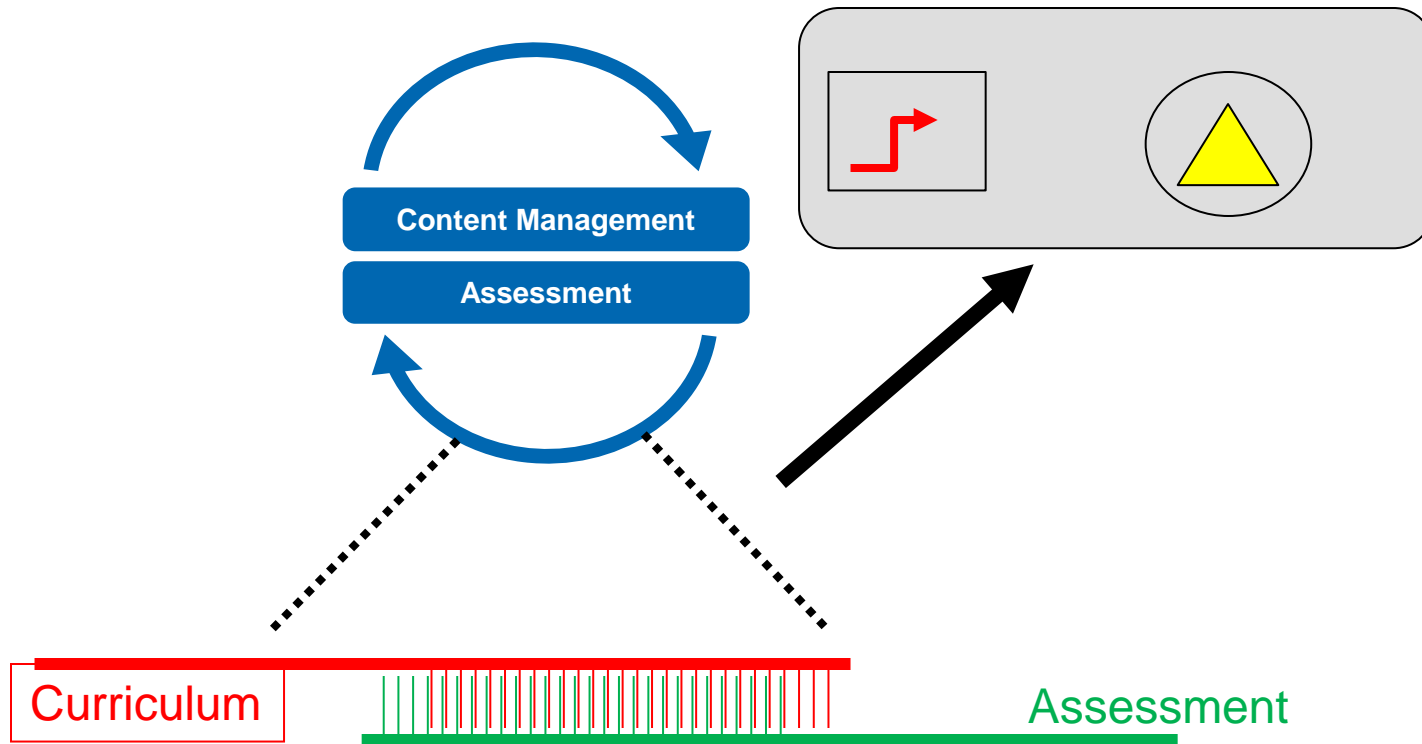
Evolution of Digital Instructional Tools



DTP Instructional LoopS



Embedded (Formative) Assessment





Digital Teaching Platform

- **Designed for Classroom Use**
 - Real Time Classroom Management
- **Teacher-Centric**
 - Scaffolds Teachers
- **Open Curriculum—Flexible, Teacher-Modifiable**
- **Lesson Planning Tools**
- **Individual, Group, and Whole Class Curricula**
- **Collaborative, Project Centered**
- **Adaptive Assessment Loop for Personalized Instruction**





Changing Metaphors

Player Piano

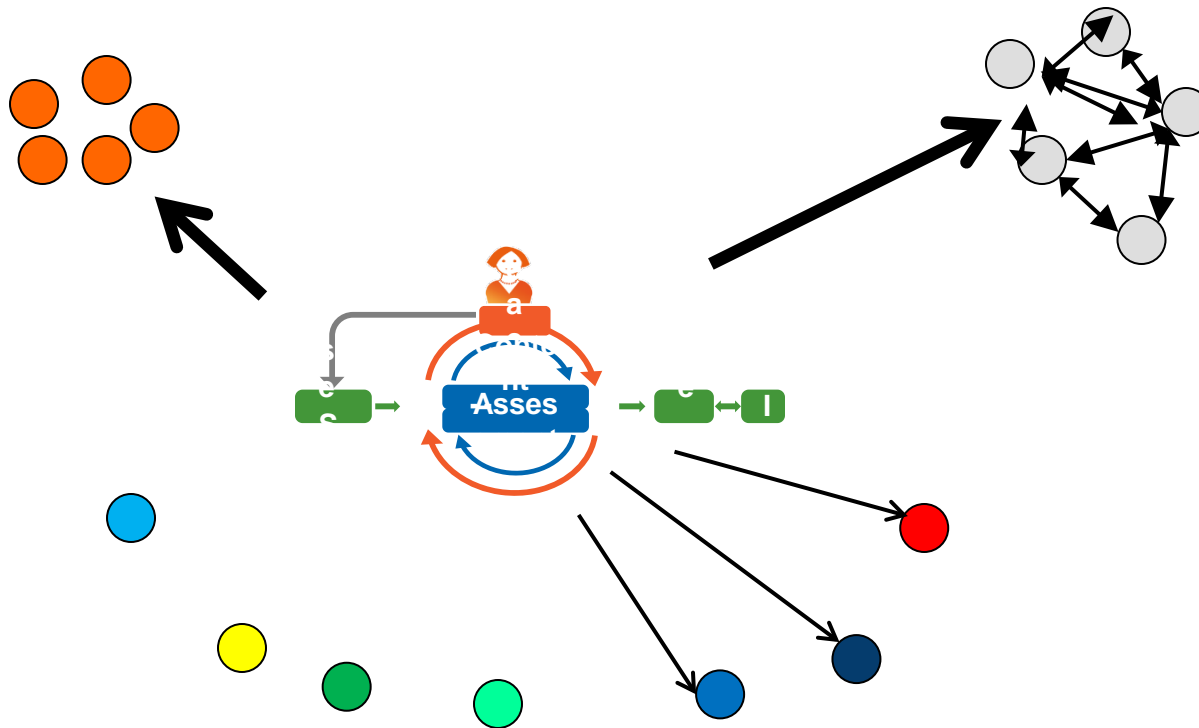
Jazz Combo

Work	Factory	Learning Organization
Cognition	Warehouse	Process
Learning	Information Transfer	Thinking Skills
Student	Clerk	Symbolic Analyst
Unit	Individual	Team
Content	Curriculum	Project
Teacher	Lecturer	Facilitator
Assessment	Multiple Choice	Authentic/Portfolio

Choreography: The Guide on the Side



Distributed Curriculum



Integrated Digital Classroom Solution





Professional Learning

Traditional Topics:

- Mastering the Tools
- Mastering the Content
- Lesson Planning

Digital Teaching Platform Topics:

- Classroom Management: Choreography
- Pedagogy and Open-Ended Problems
- Customization and Assessment

