Integrating E - Learning Into School's Work: A Four Circles’ Model

Bader A. Alsaleh, Professor
Dep. Of Instructional Technology
College of Education/ King Saud University/ Riyadh

Ba_alsaleh@yahoo.com
Integrating E-Learning Into School's Work: A Four Circles' Model

Components of School's Work

Q M

P

ID

OD

A CM

KM I FD

TD E
Model's components

1 Components of School's Work
   - T
   - L
   - C
   - I
   - E
   - SA
   - LE

2 Tasks
   - OD
   - ID
   - FD
   - TD

3 Processes
   - A
   - P
   - I
   - E

4 Management & Control
   - KM
   - CM
   - QM

15/1/2010
Integrating E - Learning Into School's Work: A Four Circles’ Model

Interdependence Relationships

Processes → Tasks → Components of School’s Work

Processes: A, P, I, E

Tasks: OD/ID/FD/TD

Components of School’s Work: TL, C/I/E, SA, LE

Management & Control: QM/ KM/ CM

15/1/2010
Integrating E-Learning Into School's Work: A Four Circles’ Model

Drivers for Paradigm Shift

- Technology
- Ed. Theory
- Knowl. Age Skills
- Ed. Dilemma
- Brain Rese.

Processes

- A
- P
- I
- E

Tasks

- OD
- ID
- FD
- TD

SWC

- T
- L
- C/I/E
- SA
- LE

Knowledge Age Requirements

- Skills:
  - Core
  - Life
  - KA
  - GL
  - CC
  - SC
  - AI
  - AE
  - LO
  - FL

Ed. In The Future New School

Ed. Today Old School

15/1/2010
Model's Background: Drivers for Paradigm Shift

- Ed. Theory Shift
- Ed. Dilemma
- Tech. Shift
- K.A. Skills
- Brain Research
- New School
Model's Background: Drivers for Paradigm Shift

Technology Shifts:
- From Mono Media To Multimedia
- From Linear Media To Hyper & Non Linear
- Social Networking (Facebook, Plogs, Twitter, Mobile Tech. ETC.)
- Complex visuals interfaces on Touch Screens
- Etc.
Model's Background: Drivers for Paradigm Shift

3rd Millennium Skills: New Skills for New Times

- Digital Age Literacy
- Critical & Inventive Thinking
- Effective Communication
- High Productivity
Shifts in Educational Thought: New assumptions

- Knowledge Constructed
- Active Learning
- Learner Control
- Authentic & Contextual Learning
- Social & Cooperative: Distributed Cognition
- Multiple Perspectives
- Democratic classroom
- Sharing of power & control in classroom
- Process approach to instruction
Model's Background: Drivers for Paradigm Shift

Learner:

- Responsible for his learning: Curious, Persistent, Initiator
- Self Learning Skills
- Technology Proficient
- Information provider
- Media Literacy
Model's Background: Drivers for Paradigm Shift

Teacher:
- Information Consultant
- Coach, Facilitator
- Instructional Designer and Developer
- Academic advisor
- Team Member
Model's Background: Drivers for Paradigm Shift

Technology Role:
- Learning Tools
- Intellectual Partner
- Integrated
Model's Background: Drivers for Paradigm Shift: Education Dilemma

Critics Say: Bankruptcy of the Industrial Age School
What Do You Say?
Critic's Say:
Bankruptcy of the Industrial Age School

What Do You Say?
Model's Background: Drivers for Paradigm Shift: Education Dilemma

Critics Say: Bankruptcy of the Industrial Age School

What Do You Say?
Model's Background: Drivers for Paradigm Shift: Education Dilemma

Critics Say: Bankruptcy of the Industrial Age School

What Do You Say?
Model's Background: Drivers for Paradigm Shift: Education Dilemma

Critics Say: Bankruptcy of the Industrial Age School

What Do You Say?
Model's Background: Drivers for Paradigm Shift: Education Dilemma

Critics Say: Bankruptcy of the Industrial Age School

What Do You Say?
Critics Say: Bankruptcy of the Industrial Age School

What Do You Say?
Model's Background: Drivers for Paradigm Shift:
Education Dilemma

Critics Say:
Bankruptcy of the Industrial Age School

What Do You Say?
Model's Background: Drivers for Paradigm Shift: Education Dilemma

Critics Say:
Bankruptcy of the Industrial Age School

What Do You Say?
Model's Background: Drivers for Paradigm Shift

Education Dilemma: Fragile Knowledge

Learning Transfer

Motivation

David Perkins (Smart Schools, 1995)

15/1/2010
Model's Background: Drivers for Paradigm Shift

Education Dilemma: Fragile Knowledge

- Middle Schools Say Enrolled students Can Not Read,
- Secondary Schools Say Enrolled students Can Not Write,
- Colleges of education Say Enrolled students Can Not Think,
- And All schools Say Pre-Service Teachers Can Not Teach

(Rowentery, D.1984)
Model's Background: Drivers for Paradigm Shift

Education Dilemma: Fragile Knowledge

- Closed Learning Environment
- Fragmented and Irrelevant Learning
- Technology Tools for Teaching
- Factual Learning
- Output/Quantitative Based Education
- Place and Time Bound Education
- Centralized school Administration
- Group and Verbal Instruction
- Lecturing/Passive Learner
- Test Based Evaluation
- Competitive Environment
Brain-Based Research Learning:

- The brain is a complex adaptive system (VARK)
- The brain is a social brain (collaborative learning)
- The search for meaning is innate (learning goals)
- The search for meaning occurs through patternning (activating prior knowledge)
- Emotions are critical to patternning (take care of emotional climate; avoid emotional unrest)
- The brain simultaneously perceives and creates parts and wholes (Integrated approach to learning)
- Learning involves both focused and peripheral attention (Allan Pritchard, 2009)
Drivers for Paradigm Shift:

1. Transition from Teaching to Learning
2. Exponential Growth of Information
3. Courseware Vacuum: Open Education Movement (e.g. Wikiversity. Moodle, Curriki.org)
5. Our “Touch Points” for Interfacing with Society are Changing
6. Learning Drivers
7. The Age of Hyper-Individuality
8. Transition from Consumers to Producers

Futurist Thomas Fry (E.D. DaVinici Institute)

15/1/2010
Model's Background: E-L Integration Assumptions

- E-L Integration is a Complex process
- E-L Integration Should be Part of Comprehensive Reform
- E-L Integration Fulfils its Promises if:

  - Fully Integrated in All Components of School Work and Not Added
  - Pedagogy-Based
  - Shifts Took Place in School Processes
  - Goal-Based: Used to Meet Felt Needs
Model's Background: E-L Integration: Questions

- Should Technology Takes Over all Teachers, Roles?
- How Should Technology be Integrated into Teacher's tasks?
- Do Schools have to depend on Computers for all levels, students, subject matters?
- Is There reliable data about the benefits of using technology in certain ways?
- How Should Technology be used to support a new perspective about school's work?

(Robelyer, 2002)
Integrating E - Learning Into School's Work: A Four Circles’ Model

1. Identify Components of School's Work
2. Identify Tasks to be accomplished
3. Decide the Processes to be carried out to Execute the Tasks
4. Decide how to Manage & Control the Processes
Components of School's Work

- Learner
- Teacher
- Curriculum
- Instruction
- Evaluation
- School Administration
- Learning Environment
2 Tasks

2-1 Organizational Development

- Policies
- School's Culture: Postmodernism Thoughts
  - Respect Values & Beliefs
    - Difference over Uniformity
    - Multiple interpretations
    - Multiple responses
    - Multiple discourses
- Local Management
- Facilitative & Transformative Leadership
Integrating E - Learning Into School's Work: A Four Circles’ Model

2 Tasks

2-2 Instructional Design & Development

- Core Curriculum
- Supportive Curriculum
- Global Education
- Differentiated Instruction
- Multiple Paths to Learning
- Authentic Instruction
- Alternative Evaluation
Tasks

2-2 Instructional Design & Development

- Postmodernism Thoughts:
  - Consideration of Needs
  - Multiple Solutions
  - Evaluation of Solutions
  - Share of Power Related to Message Design
  - Multiple Perspectives
  - Nonlinearity
  - Learn from failure

(Andrew yeaman, 1994)
15/1/2010
2 Tasks

2-3 Faculty Development

- Values and Beliefs
- Knowledge and Competencies
- Talents and Interests
Tasks

**2- 4 Technology Development**

- Learning goals, context and activities based use of Technology.
- Implications of Sociology and Critical Theories of Educational Technology.
- Inquiry-Based Technology Integration strategies
Educational Technology: Theoretical Framework:

Critics say:

- Scientific, Behavioural, & Rational
- Denies life world
- Fragments learning
- ID relies on empirical scientific model (Reductionist & Simplistic).
- Results are: mechanistic cognitive styles & technical forms of knowledge.
- Objective, law like & valueless knowledge.
Educational Tech & ID: Critical Theory Implications:

- Find ways to construct meaning in context.
- Provide resources to support meaning making.
- Give up teacher user proof instruction.

(Streibel, M. J. 1991)
Educational Tech. & ID: Critical Theory Implications:

Ed. Technologists should:

- Use Action research
- Research issues (societal relations, gender, race, capitalism, culture, politics, ethics, language, visuals, etc.) that are largely unconscionably ignored.
Educational Tech & ID: Critical Theory Implications:

Ed. Technologists should:

- Become critical pedagogiests: (e.g. learning is relevant only in light of students experiences and transformative only when students use the knowledge to empower others).
Integrating E - Learning Into School's Work: A Four Circles’ Model

Educational Tech & ID: Critical Theory Implications:

Ed. Technologists should:

- Not be busy using technology to do things for learners but to ask them to use it from philosophical, political, economical, ecological, & educational informed subjective positions standpoint.
Impact of ed. tech. on schools should be about the work done:
How it is defined, who does it, to what purpose, and how it is connected to community.

Tech. Change ways of information sharing, hence it may change the distribution of power and alter how work is done.

(Stephen Kerr, 1996)
3 Processes

3-1 Analysis

- Needs Assessment:
  - Assess Levels of Readiness related to: OD, ID, FD, TD, QM, KM, CM to integrate E – L into School's Work
  - What Is?
  - What Should be?
  - Gaps, Goals, Priorities, and Interventions
Technology Planning:
- Vision, Mission, & Goals Related to:
  - OD, ID, FD, QM, KM, CM
  - Criteria and Performance Indicators of Levels of e-L Integration into School's Work
- Involve all Stakeholders Including Surrounding Community
Integrating E - Learning Into School's Work:  
A Four Circles’ Model

3 Processes

3-3 Implementation

- Implementation of Activities related to: OD, ID, FD, QM, KM, & CM:
  - Measuring Levels of E-L Integration into School's Work:
    - Collection of Evaluation Data
    - Instructional & Technical Support
    - Knowledge Management
    - Adoption & Integration
3 Processes

3- 4 Evaluation

- Analysis of Evaluation Data
- Writing Evaluation reports
- Deciding appropriate Interventions
- Implementing Interventions
- Recycling
Integrating E - Learning Into School's Work:
A Four Circles’ Model

Management & Control

4-1 Change Management:
- CM of All processes related to: OD, ID, FD, QM, KM, & CM

4-2 Quality Management:
- QM of processes related to: OD, ID, FD, QM, KM, & CM

4-3 Knowledge Management:
- KM of data & information related to: OD, ID, FD, QM, & CM
Knowledge Age Requirements:
- What is the School of the future?

- Intelligent / Smart School?
- E- School?
- Virtual School?
- Digital school?
- Learning School?
- Global School?
Some Characteristics of The Future School:

- Independent, Persistent & Dedicated Learner
- Facilitative Teacher
- Transformative Leadership
- Integrated, Flexible & Work Place Curriculum & Learning Experiences
- Learning Tools Technologies
- Authentic Instruction
- Authentic Evaluation
- Collaborative & Interactive Learning
- Learning Organization
Characteristics of the Future School

- **Students:**
  - Understand Knowledge
  - Recall Knowledge
  - Use Knowledge

- **School:**
  - Informed
  - Active
  - Thoughtful

David Perkin, 1996 (Smart School)
1. Components of School Work

- Learner
- Teacher
- Curriculum
- Instruction
- Evaluation
- School Administration
- Learning Environment
Characteristics of the Components of the School's Work In The Knowledge Age:

- Learner

Diagram:
- Core curriculum Skills
- Knowledge Age Skills
- Life Skills
- Learner intersecting all three components.
Characteristics of the Components of the School's Work In The Knowledge Age:

- Teacher
  - Values/beliefs
  - Knowledge
  - Skills

New Roles
Characteristics of the Components of the School's Work in the Knowledge Age:

- **Curriculum**

![Diagram showing the components of the school's work in the Knowledge Age]

- Core
- Supportive: Knowledge Age Skills
- Supportive: Life Skills
Characteristics of the Components of the School's Work In The Knowledge Age:

- Instruction:
  - Authentic
  - Situated
  - Interactive
  - Collaborative
  - Verbal & Visual Thinking Approaches
  - Coaching
  - Meaningful
  - Active Participation
Characteristics of the Components of the School's Work In The Knowledge Age:

- **Evaluation:**
  - Authentic
  - Performance – Based
  - Multiple
  - Formative
  - Individual & Cooperative
Characteristics of the Components of the School's Work In The Knowledge Age:

- School Administration

![Venn Diagram]

- Vision
- SA
- Leadership
Characteristics of the Components of the School's Work In The Knowledge Age:

- **School Administration**

(FV, OV, PV, SV)
Characteristics of the Components of the School's Work In The Knowledge Age:

- School Administration

( Morse, 2004)
Characteristics of the Components of the School's Work In The Knowledge Age:

- Learning Environment

![Diagram of components with Learning Environment highlighted]
Integrating E - Learning Into School's Work: A Four Circles’ Model

Thank You
Your Comment Will be Highly Appreciated

Ba_al.saleh@yahoo.com