Termly Conference of Tobago Principals Feature Address -

Reshaping Teaching and Learning through ICTs

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Purpose of Presentation

• To highlight some of the trends/best practices in teaching and learning with Information and Communication Technologies (ICT).

• ICT covers all technologies used for the handling and communication of information and their use, specifically in education. For example Internet, tablet PCs, e-readers, laptops etc. (MOE, ICT Draft Policy, 2005).
Minimally Invasive Education (MIE)

• 300 children observed for 9 months without teacher
• Knowledge construction, social exchange thru curiosity
• Learning independent of children’s demographics
• Improvements include:
  † Attendance & exams
  † English, concentration
  † Problem-solving, team work, and Self-regulation

“Hole in the Wall Project, India” (Mitra, 2004)
New Literacies

- Use Questions
- Locate Information
- Evaluate Information
- Synthesize Information
- Communicate Information

Vacca & Vacca (2008)
Mobile and Game-Based Learning

**World Peace Game**

Develops collaboration and higher order thinking skills as students have fun in determining how to disengage countries under the threat of war.

**Mobile Math Innovation**

- Lessons
- Examples
- Tutorials
- Quizzes
- Games

Kallo, V & Mohan, P, 2011
Flipped Classroom

• Coursework is done at home

• Home-work is done in the classroom

• More in-class time to focus on problem-solving skills
Immersive Learning

- Learning thru motion
- Video games with video motion (Kinect or Xbox 360)
- More engaging using all senses
- Technology interfaces easily with white boards, multimedia projectors, and televisions

(Center for Digital Education, 2012)
Learning Theories for Digital Age

• **Connectivism**: Learning is experienced externally by forming connections to sources of information.

• **Constructivism**: Constructing new knowledge thru self-directed learning building on prior experiences.

• **Engagement theory**: Engaging in learning activities thru interaction with peers and meaningful tasks.

(see references at the end)
Bloom’s Digital Taxonomy

- **Creating**
  - Designing, constructing, producing
  - Blogging, wiki-ing, podcasting

- **Evaluating**
  - Checking, judging, testing
  - Commenting, posting, networking

- **Analysing**
  - Comparing, finding, organising
  - Linking, tagging, validating

- **Applying**
  - Implementing, using, executing
  - Running, loading, editing

- **Understanding**
  - Interpreting, classifying, explaining
  - Commenting, blog journal, twittering

- **Remembering**
  - Recognising, listing, identifying
  - Highlighting, Listing, bookmarking
Technology Integration Planning Model

**Phase 1** – Identify problem, determine relative advantage of technology integration

**Phase 2** – Determine objectives and assessment (very key to successful ICT integration)

**Phase 3** – Design teaching strategies (place emphasis on pedagogy and not technology)

**Phase 4** – Prepare classroom environment

**Phase 5** – Evaluate and revise

(Roblyer, 2010)
Barriers to ICT Integration

- Lack of ICT knowledge and skills
- Inertia toward ICT integration
- Ineffective training and lack of time
- Lack of access to resources
- Lack of technical support

(Mahadeo, 2011, p. 50)
Open Educational Resources (OER’s)

- Commonwealth of Learning (COL) defines OER’s as the following:
  “materials offered freely and openly to use and adapt for teaching, learning, development and research.”

- Operates under a Creative Commons license: allows the materials to be copied, adapted, and used ... Provided the finished product is shared in a similar way with others

(COL, 2009).
References


• Flipping the Classroom –Simply Speaking: http://eng.letscc.net/detail.php?idx=38958&k=Flipped%20classroom

References

• World Peace Game: http://www.worldpeacegame.org/world-peacegame-foundation/about-the-game

• Constructivism: http://learning.media.mit.edu/content/publications/EA_Piaget%20_%20Papert.pdf

• Engagement Theory: http://home.sprynet.com/~gkearsley/engage.htm


Thank You!