THE TRANSFORMING ROLE OF I.C.T: IMPLICATIONS FOR TEACHER PREPARATION AND DEVELOPMENT IN GHANA

KWAME BEDIAKO ASARE

Institute of Education

University of Cape Coast

INTRODUCTION

- Education: Development of human resource to accelerate developmental efforts of a country in all sectors of the economy/society
- Educational enterprise to lead this
- Central to the education enterprise is the teacher
- Attention needs to be given to the training and retraining given to teachers (new teacher)
- Today's teacher needs to be trained/retrained to be able to effectively use the technology that supports and facilitates student learning

INTRODUCTION (Cont.)

- What ICT Is
- Fields of usage (All endeavours)
- Education: Changing Teaching/Learning through ICT
- Means of challenging self
- What ICT skills are needed?
- Implications for Teacher Preparation
- Recommendations
- Conclusion

What ICT Is

- "The term 'information and communication technologies' (ICT) refers to forms of technology that are used to transmit, process, store, create, display, share or exchange information by electronic means"

    (UNESCO, 2007, p.3)

FIELDS of USAGE of ICT (Roles)

- Every sphere of life
- Politics, Accounting/Finance/Commerce, Industry, environment, Education, Health, Architecture, Agriculture, Socialization (Personal + others), Communication, etc.

FIELDS of USAGE of ICT

- So pervasive are the changes in society associated with ICT to the extent that we can say that we are living in:

❑ A world in transformation; indeed the era of the information society (Swope, 2008)

FIELDS of USAGE of ICT (EDUCATION)

- Brings about change in
- ❑ pedagogy
- ❑ curriculum
- ❑teacher training
- ❑assessment
- ❑School organization
- ❑System

Requirements for change

- Have a vision
- Create a master plan
- Build alignment (b/n policies & programmes; within agencies; across agencies)
- Look for levers
- Design programmes
- Provide resources
- Team with partners

Role of ICT (Teaching)

- Presentation formats. E.g. power point, word documents etc
- Capturing things not within reach E.g. Mountains
- Wild animals
- Getting details of minute organisms
- Teaching becomes interactive
- Teachers share resources (E.g. TESSA resources)
- Variety in delivery

Role of ICT (Teaching cont.)

- Teachers become resourceful
- Research
- Collaboration
- Analysis
- Enabling future transformation (initiative/innovation/critique).

Role of ICT (Learning)

- Real
- Details of issues/facts.e.g. soil profile
- Learning on their own
- Learning is informal, flexible yet dynamic and whole
- Learning is everywhere, anytime
- Up-to-date with information
- Variety of learning opportunities & processes

Role of ICT (Learning)

❑ **Question:**
- Is it not the case that learners are interacting more frequently with ICT?
- Is it not the case that learners are learning faster/broader than what teachers teach?
- How do we equip teachers to really facilitate learning in learners if not training them in ICT usage?

Role of ICT

- ICT can provide access to remote colleagues and experts , provide simulations and media-rich learning environments, and provide data collection and management tools that support teacher training, improve student learning, and increase the efficiency of the education system (Kozma, 2008)

Enabling teachers

❑ Personal
❑ Professional
- The new teacher
❑ Pre-service
❑Continuous professional development
- In-service training
- Workshops
- Conferences

Enabling teachers
Question: What are we to equip teachers?

- Familiarity with ICT
- Abilities to utilize ICT for preparation and evaluation of material, research and teaching
- Abilities to teach students, utilizing ICT in class
- Abilities to teach ITC utilization by learners
- Abilities to teach information morals
- Abilities to utilize ICTs for school affairs

Implications for Teacher Preparation

❖ Pre-Service
- ICT be part of curriculum (not just for familiarity)
- Practice sessions (hands-on)
- Accessibility (Availability of computers, time schedules for using computers, etc)
- Assignments:
  - Plan lesson using ICT
  - Deliver lesson using ICT

Implications for Teacher Development

❖ **In-Service**
- **Training for developing ICT-ready curriculum (CRDD/TED)**
- **Workshop for training people to integrate ICT into educational system (CRDD/GESDI/TED)**
- **Workshops, in-set, conferences for teachers**
  - **Elements of ICT knowledge base**
  - **Elements of ICT usage**
  - **Demonstration of lessons with ICT**
  - **Participants to try hand on**

NB: Need for multi-sectoral approach (E.g. MOE, MOF, Ministry of Communication and their Departments and Agencies)

Challenges

- Individual
  - Availability of time
  - Ability to collaborate
  - Willingness to learn and use knowledge
- Institutional
  - Supportive environment
  - Maximisation of learning experiences and outcomes
  - Development of community of practice and support
  - Economic viability
- Technical
  - Contents need support
  - Manageability
  - Scalability to meet education requirements
  - Storage, backup, retirement (Sharma, 2008)

Challenges

- How many computers do your buy?
- Do you rally need one fore every student?
- Will one for each classroom or a dozen for each school be sufficient?
- Do they all need to be networked?
- What bandwidth is necessary?
- What kind of training do teachers need to take advantage of these resources?

(Robert kozma, 2008)

- How do you get the finances required?

Recommendations

- E-readiness survey
- Needs assessment
- Have a vision
- Create a master plan
- Build alignment (b/n policies & programmes; within agencies; across agencies)

Recommendations (cont.)

- Look for levers
- Design programmes
- Provide resources
- Team with partners
- Establish computer laboratories/centres (resource centres)
- ICT training course: A increase in salary
- Supervision/Awards

Conclusion

- It is only when ICTs are accompanied by a cluster of inter-related and mutually-reinforcing changes in the system that significant impact can occur
- We cannot afford to continue lagging behind by providing lip service. We need to embark on vigorous change agenda to integrate and promote use of ICT in teacher training programmes in Ghana

Conclusion (cont.)

- The right conditions need to be in place, . . . before the educational benefits of ICT can be fully harnessed. In many cases, significant efforts are required at the national level, including careful planning for ICT integration and the implementation of a system of ongoing professional development for teachers. Apart from acquiring locally-appropriate forms of ICT, schools need to obtain technical support and motivate and train teachers to make better use of those ICT tools for enhancing education (Shaeffer, 2007)