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ICT and Reforming Higher Education for Educational Transformation

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Abstract

This article presented a new educational system for educational transformation using Information and Communication Technology. It contains five sections: 1) re-definition of education through recently a new trend of education system, 2) policy for ICT education system, 3) open education and ICT application, 4) contributions of private sectors, and 5) roles and the use of ICT in higher education. Best practices and case studies from the Caribbean region were also shared with the objective that they could possibly be re-contextualized for the Pacific region. In this view the paper presents constraints for the implementations of ICT in higher education globally which are described with the views of educationists, thinkers, social workers.

Keyword : information and communication technology, higher education

Introduction

In the world of globalization concept and its acceptability in the knowledge society which shape the progress and development of any county, ICT is redefined according to their needs. The Learning Community is an organization developed for the improvement in the ways of teaching and learning by the application of creativity and innovative practices in education system. Objectives of the organization are to develop and promote learning and education and to provide a forum for discussion and deliberations on issues and problems related to education in general and learning in particular. Teachers are key factors in maintaining and improving the quality of education and training systems. In the present era of technology, teacher's obligation is confined not only to acquire new knowledge and skills but to develop them continuously. The education and professional development of every teacher needs to be seen as a lifelong task, and be structured

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and resourced accordingly. Professional development refers to activities to enhance professional career growth of teachers to foster teacher's growth. Professional development of teachers is to develop new insights into pedagogy and their own practices, and explore new or advanced understandings of contents and resources. To equip the teaching body with the skills and competences requires continuous professional development programme. Need of outsources and localization of education through Information and Communication Technology (ICT) in order to achieve national goals through planning is a challenging issue for teachers, educators, and scholars.

Redefining Education

From primitive society to Information and Communication Technology based society education played vital role for its progress. Worldwide education system adopted by most of the countries with their culture, educational system adopted with respect to their language, regional factors act. After independence India has adopted different policies made by different commissions. "it is the education which is the right weapon to cut the social slavery and it is the education which will enlighten the downtrodden masses to come up and gain social status, economic betterment and political freedom", (Ratna, Bharat & Ambedkar, B.R., 1968).

The concept of exploration of education according to Dr. B.R. Ambedkar in India at the time of independence has been changed now a day. Need based education and worldwide competitions' gives birth of new technology based education. The new visitation has shaped our educational system.

Government Policy for ICT Education

It is the responsibility of the government in order to educate their people and improve the quality of education for social development. Information and Communication Technology (ICT) is the weapon in the field of education by which both the quality and quantity of educational objectives can be achieved. From primitive society to modern age technology. Based fourth wave of educational system depends on the teachers for promoting education according to the social need. World Wide Organizations for promoting education both quality and quantity

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are keeping their bird eyes for the promotion of education in underdeveloped, developed and developing countries. Time to time the policy matter and decisions for global educational development through ICT application unknowingly reached to the unreached people needs.

Worldwide Policies for ICT Applications

Participants at the forum included representatives from nine Commonwealth Pacific Island Countries (PICs). Among the participants were the Honourable Ministers of Education from Samoa and from Kiribati. The forum was a joint initiative of the United Nations Educational, Scientific and Cultural Organization (UNESCO), the Commonwealth Secretariat, the Commonwealth of Learning (COL) and Microsoft, aimed at providing a platform for exchange and action on education transformation.

The objectives of the forum were to:

1. Explore how ICT has been integrated into teaching and learning in the Pacific;

2. Review the issues, challenges and initiatives related to ICT competencies for teachers in the Pacific;

3. Introduce the UNESCO ICT Competency Framework for Teachers (CFT);

4. Discuss teacher development approaches that make capacity building possible;

5. Discuss where and how policies and practices in education need to respond to harness the potential of ICT in teacher development;

6. Explore possibilities for further implementation/contexualisation of the UNESCO ICT CFT in the Pacific; and Engage multilaterals, donor agencies, NGOs, private sector on collaboration within the region to implement ICT in Education initiatives.

During the forum, presentations were made by Pacific regional representatives including USP, UNESCO-Pacific Office and the Secretariat of the Pacific Community on the current status of ICT in education in the region. Professor Chandra made a presentation on ICT and its role at USP and the Pacific region. He was also a member of the panel discussion on issues in ICT in the Region. The

donor presentations were focused on the importance of building teacher capacity in ICT in education. Best practices and case studies from the Caribbean region were also shared with the objective that they could possibly be re-contextualised for the Pacific region.

The presentations brought about engaging discussions amongst the delegates on experiences, challenges and opportunities of integrating ICT in education for the Pacific region. The discussions will be extended through an online forum to continue to discuss issues raised at the forum. The forum also provided USP with the opportunity to share and create awareness of its role in ICT in the Region. It also provided an opportunity to discuss with COL the Open Education Resource (OER) that was developed by COL, known as the Commonwealth Certificate for Teachers' ICT Integration (CCTI). It was mutually agreed that the CCTI will be used by the School of Education as part of its offering to enhance the knowledge and skills of both pre-service and in-service teachers. COL has also agreed to send a consultant to assist SOE in implementing this programme. One of the key documents discussed at the Forum was the UNESCO ICT Competency Framework for Teachers. A lot of lively discussions centred on the document and the way forward in terms of its implementation.

It was discussed that the Regional ICT Framework for Teachers mandated by the leaders to be formulated jointly by USP and SPC was to be discussed at the Forum of Education Ministers' Meeting (FEdMM) in Vanuatu. It was then generally agreed by regional participants that they would have to wait until endorsement was made at the FEdMM meeting. It was also pointed out that leaders were free to decide the development of ICT in Teacher education in their own countries. UNESCO, the Commonwealth of Learning (COL) and the Thai Teachers TV (TTV) organized a Policy Forum for Asia and the Pacific on Policy and Practices in Open Educational Resources in Bangkok with 74 participants from 18 countries. "During these two days we will hear the voice of practitioners in OER, as the regional forum will focus on targeted recommendations to have solid contributions for the global Conference on OER in Paris in June 2012", said COL President Sir John Daniel in his opening remarks. He set the frame on the purpose and scope of the regional forum and its important contributions to global discussions that shall

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feed into the upcoming Paris Conference. The contribution of this region Pacific region is fundamental to this discussion, as the immense growth of mega-universities in Asia " is a reason why this region is at the lead in developing open educational resources".

Representing the host country Thailand, Churairat Sangboonnum, Secretary General of the Thai National Commission for UNESCO, said that "Open licenses can create a new learning and teaching paradigm and bring benefit to all people of different age and background. " In a survey-based overview on OERs in Asia, Ishan Sudeera Abeywardena, Wawasan Open University, named the trends of OERs in the region, which are spreading quickly and widely, and shed light on outstanding issues, namely the lack of software integration, and limited access to computers and to internet, as well as open questions about opyright, ownership and awareness of available resources. He closed his presentation pointing out that a "culture of collaboration between the organizations needs to be established."

"Three years ago nobody knew about OER", said Ms. Trudi Van Wyk (COL) who presented definitions and a common understanding of OER as " freely accessible and legal to copy". She also outlined the '4 Rs' of OER as: Remix – Redistribute – Reuse – Rework. Main elements in defining OER are sharing, contribution, customization, localization, translation and contextualization. The second day of the forum was used to further develop the circulating draft of the Declaration on OER, which will be officially released by the Paris Conference in June 2012. The working draft includes so far comments and suggestions from regional policy forums held in the Caribbean (January 2012), Africa (February 2012), Latin America (March 2012) and Europe (April 2012). After the Asia-Pacific review, the last regional forum will follow in May for the Arab States. Participants perceived the OER initiative as very positive, but raised issues such as lack of knowledge about initiatives in other countries, the variety of licensing systems worldwide, a focus on higher education, quality issues of available materials, and lastly different copyright laws and practices. " We need strong support from the government, from the private sector, and from non-government organizations,"said Ninnat Olanvoravuth, Secretary General of the Association of Southeast Asian Institutions of Higher Learning and participant at the workshop. "The forum was really impressive, it has

been an eye- opener for me on how most developing countries develop, implement and access OERs," concluded Cheri Moana Robinson, National University of Samoa, another participant at the workshop.

Open Education Resources is an innovative approach to promote greater access to high quality education through freely available and adaptable teaching and learning materials at low cost. OER is defined as " teaching and learning and research materials in any medium that reside in the public domain and have been released under an open license that permits access , use, repurposing, reuse and redistribution by others with no or limited restrictions" (Atkins, Brown & Hammond, 2007).

Open Education and ICT Application for Educational Reform

A new distance training programme on education sector planning was launched simultaneously in Thailand, Indonesia and Vietnam on Wednesday 6 June 2012. The Thai launch took place at Chulalongkorn University in Bangkok, Thailand. " In Education planning nowadays, the most notable change is change itself," said Mr. Gwang-Jo Kim, Director of UNESCO Bangkok, at the opening of the half-day panel discussion to mark the launch of the new training programme. Education sector management is facing new challenges such as jobless growth, student mobility, labour migration, advances in technology and climate change. " This requires very careful educational planning, and we need to think about what kind of future we want to have. Educational planning is aiming to close the gap between now and the future," said Mr Kim.

The training was developed by UNESCO' s International Institute for Educational Planning (IIEP) with financial support of the J.P. Morgan. Mr Khalil Mahshi, IIEP Director, addressed participants via a video message. " Without educational management and planning, we will not meet the challenges ahead and the expectations towards educational decision makers; we have seen investments in human resources help lift countries out of poverty and steadily improve basic socio-economic indicators and social welfare. Strong, compelling evidence of this has occurred in recent decades in Thailand, Indonesia and Vietnam".

From my personal experience education starts long before the age of three. Children from a rich family tend to have a high language acquisition skill, whereas children from a poor family have a very low language acquisition skill. So, if we only focus on school and do nothing before they enter school, you'll never be able to deal effectively with educational disparity. The panelists discussed issues, such as creating inclusive school environments, student performance, employability and lifelong learning.

"Education planners and policy makers should look at the employability aspect of graduates beyond the domestic boundary. Education should not be a preparation for life but should happen throughout life as lifelong learning," said Dr. Yongyuth. Closing the discussions, Dr. Pruet Siribanpitak, programme coordinator and Head of the Educational Administration Division, Faculty of Education, Chulalongkorn University, addressed the 22 course participants from the Thai Ministry of Education, different universities and other public institutions in Thailand.

Mr Siribanpitak said: "Because we face various changes, education can help to cope with these changes, and we hope that all of you become a new generation of educational planners. Some of you may be instructors of a new educational planner too." The new
UNESCO distance training programme provides six modules to be learned over a time span of 11 months. The training offers a whole range of skills and techniques required for education sector planning. (Source: UNESCO REPORT, 2012)

The Private Sector if a Key Ally in the ICT Area

In partnership with Microsoft, IIEP held a round table on the Implementation of Public-Private Partnerships for the Education Management Information Systems, in Dakar, Senegal, on 8–9 December 2011. Discussions explored approaches to achieving sustainable solutions for strengthening national information systems. The private sector contribution to ICT was seen as crucial. Participants agreed that, for a partnership to be effective and sustainable, it must be conceived in a comprehensive way: a mere financial contribution will not suffice. Providing expertise and organizing transfer of skills can help achieve the partnership's objectives and ensure sustainability of achievements.

The meeting was also an opportunity to launch a joint initiative between IIEP, Microsoft, and Orange to collect data on education systems using mobile media. The pilot phase of the project, which is being finalized, will take place in one of six African countries that participated in the meeting (Benin, Burkina Faso, Cameroon, Côte d'Ivoire, Mali, and Senegal). All have expressed strong interest in the project, as it would provide an important opportunity to collect and analyses quality data about their education systems and pupils. "The unavailability of reliable and timely information has a negative impact on the education system at national level, but it also restricts the possibilities for international comparative studies, as well as the work of financial and technical partners", said Sylla.

In addition to the six African countries and the organizers, the meeting was also attended by the companies Orange Device Group, Mbodj SYSTEM, and SOLID, the NGO Aide & Action, and representatives of the Leading Group on Innovative Financing for Development. France and Germany were represented, respectively, by the Ministry of Foreign and European Affairs and the German development agency GIZ. "Exposure to Information and Communications Technology (ICT) for teachers is not necessarily the best focus but more so the promotion of excellence in teaching and ICTs should not only be seen as an enabler of learning outcomes but also an enabler of educational reform."

A team from the University of the South Pacific (USP) led by the Vice-Chancellor and President of USP, Professor Rajesh Chandra, attended this forum. The Dean of the Faculty of Arts, Law and Education, Dr Akanisi Kedrayate, Acting Head of the School of Education, Dr Salanieta Bakalevu and the Centre for Flexible and Distance Learning representative, Ms Alanieta Lesuma-Fatiaki were also part of the USP team.

Problem and Accessibility of ICT in Higher Education

The full potential of interactive ICT presentations is awesome. Even an old standby that has existed in various forms in education for centuries, lectures, can partake of its power. Although only a few people can speak with sufficient force,

appeal and wit to keep listeners spellbound, a few modern versions of that renowned orator of ancient times, Demosthenes, can be found among professional actors. They could be employed, and their material could be written by experts in the subject matter, aided by educators and others.

Students will watch these presentations on their screens with the voice coming over their earphones. Frequency of talks will vary depending on subjects and pedagogical considerations, but when circumstances are opportune, an occasional professional lecture can be a valuable learning device. This technique is seldom used today in A-V displays. It would seem superfluous; teachers also give oral presentations at times, and they might justifiably view use of professional speakers as unfair competition. These market limitations lessen the monetary incentives of companies to develop dramatic talks. The listeners to the modern counterparts of the orators of old will enjoy added features undreamed of by the original speakers or their audiences. These modern lecturers will be integrated with the interactive capability of computers.

A lecture will be carried for some minutes, and then pertinent film clips can be interjected to maintain interest. The computer will then return to the lecture. If the student doesn't understand something, he or she can interrupt the lecture or the film clip to ask a question or request more information. The computer will either provide information that was requested, or retain the question and return to it later. For a teacher to individualize a lecture in this way is impossible; for a computer it is simple. The powerful features of ICT will be used in many subjects. A geography class can give pictures of the country and interviews with the people as ongoing parts of the presentation. These additions can be as frequent as helpful and will be integrated completely into the lesson. History courses can provide accurate portrayals on film to accompany the bare facts of dates and events. Parts of historical movies could be culled, always under the direction of historians who could choose only the episodes that were accurate. Hollywood has magnificent technology, but has a tendency to take liberties with historical facts. ICT presentations in schools will adopt only scenes that are accurate and helpful.

Science lessons will be able to provide pictures to go with the scientific material that is taught. For example, on a lesson on electromagnetic forces, a film

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could reenact the original discovery of the phenomenon. Then additional clips could show actual uses of the principle as it evolved over many years. Finally, demonstration of present research will generate additional interest. ICT learning, along with the rest of computerized education, will reach its full potential only when computers can understand spoken language better. That capability is now weak, but is progressing rapidly. The vast profits that will flow from verbal communication in business and industry will hasten advances in this area. Ultimately, its effects will accrue also to education.

Through these improvements, ICT can eliminate the many shortcomings of A-V materials and present a new learning experience. Coming technical improvements in ICT will dwarf even today's notable successes. The future will bring not only simple upgrades, but new eras. Learning and retention will improve appreciably for all youngsters because the material will be presented in an engaging form.

ICT Application in Classroom and It's Hazard

The elements that make up ICT - sound, pictures and animation - are the same elements that have always been present in audio-visual materials in classes. When A-V displays were first made available to schools, the potential value to learning seemed to be immense. The final result fell short of original hopes, and education improved only slightly with this new technology. The same danger could sabotage ICT. If schools try to use ICT without complete computerized education, they will waste one more potent educational assistant. Without this computer direction, ICT, despite its potential for education, must remain in the same position as audiovisual materials today - a powerful tool with little effect in classrooms.

When, however, computers are allowed to direct ICT, a new age in education will appear. This technology will make lessons come vibrantly alive through sound and pictures. Future generations may look back on present teaching as we look back on the "little red school house." Since those impoverished one room learning environments were the only possibilities in some areas, they were necessary and they had to suffice at the time. Computers manipulating ICT presentations were fantasies until recently. Before this, schools did well considering

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what they had. The old fashioned one room school house is now an anachronism. Schools without integrated computer and ICT capabilities will arrive at the same status. Since computerized education can captivate students, repeating a counsel of Plato many centuries ago is fitting: knowledge which is acquired under compulsion obtains no hold on the mind... do not use compulsion, but let early education be a sort of amusement; you will then be better able to find out the natural bent.

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