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A Discussion of ICT Integration within Developed and Developing World Context from Critical Perspectives

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Abstract

The main purpose of this study is to understand and reflect the effect of the Information and Communication Technologies (ICT) integration into society and schools especially to teacher education programs within two domains of the developed and under developing world throughout multicultural education, critical theory, and critical pedagogy. Based on the literature; multicultural education, critical theory, and critical pedagogy were briefly discussed. Then, from these perspectives ICT integration in developed countries view, and the developing countries view explained from the social and economic aspects. As a result of this discussion some important suggestion were made regarding of ICT implementation in developing countries based on critical approaches. It is believed that this study would likely extend the understanding of the integration of ICT into schooling in developing countries. It was suggested that ICT integration into education in developing world should be seen as a vehicle of democratization and liberation not cultural and economic domestication.

1. Introduction

Comparing to integration of ICT into teacher education programs in two different world domains, from the perspective of multicultural educational theory, critical theory, and critical pedagogy, will not be an easy task for many reasons, such as the socio economic and cultural difference between the two different settings. However, the experience of teacher education in the U.S. in relation to the integration of ICT into their programs will serve a

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useful purpose. An understanding of the possible effects of ICT integration into teacher educational programs may be gained. Two approaches can be identified toward ICT integration with in multicultural, critical pedagogies in teacher education. First, these perspectives represent the view of developed countries scholars, who mainly considers ICT as a Eurocentric, white, middle class production, which attempts to transfer the culture of this group to others (Damarin, 1998). Second, the influences of this Eurocentric, middle class production of technologies affect people in developing countries. Comparing the US and Turkey is problematic in many ways, but it is believed this study would likely extend the understanding of the integration of ICT into schooling in developing countries. Some of the evident effects are the transfer of western culture into the developing world, a relationship of power, a marginalization of indigenous cultures, and a shift in priorities. Before, presenting the discussion on these aspects of integrating ICT into education programs, it would be beneficial to frame my understanding of multicultural education theory, critical education theory, and critical pedagogy.

2. Multicultural Education Theory

Multicultural education emerged as a part of a fight for greater democracy on the part of marginalized groups in the United States (Banks, 1996a; Grant & Sleeter, 1985). The origin of the multicultural education can be found in the history of education in the United States, where African Americans, Native Americans, Latinos, Appalachians, and others were not welcomed by school systems. Only the members of the white (Eurocentric American) privileged groups were acceptable to schools. Later, minorities were allowed to have their own schools, but this did not create equality between minority and white schools. Some of the ideas that frame multicultural education are the promotion of tolerance and institutional and structural change in order to make schools more equitable places (Banks, 1996a). Freire and Macedo (1987) see education as a vehicle for transforming society through emancipatory multicultural education. Today, schools in the US are required provide equal rights and opportunities to all citizens, but students from minority groups are not served very well. There are many reasons for this, such as low household incomes, cultural differences between schools and home situations that influence the quality of education. Considering these needs and issues, teacher education programs have been struggling to prepare teachers who can better serve the diverse population in schools. There are a variety of multicultural teacher education programs; for example, Grant and Sleeter (1985) describe five approaches which include: education of the culturally different, human relations, ethnic studies, multicultural education, and multicultural and social reconstructionist education. These approaches range from a naïve view, such as idea of supporting minorities to become members of the dominant culture and the development of ethnic racial identities. Bennett (2001) addressed the "lack of definition, clarity, and purpose in multicultural education" (p. 171). According to Bennett, there are four major clusters of thought around multicultural education: curriculum reform, equity pedagogy, multicultural competence, and societal equity. Each cluster is described in detail based on Bennett's' review of the inherent assumptions, which she calls genres, of each cluster. The first cluster of thought, curriculum reform, requires that knowledge be revealed as contested and constructed. The second cluster of thought, equity pedagogy, is tied to the ideals of culturally-relevant teaching and strives to enable all students to reach their fullest potential. The third cluster of thought, multicultural competence, involves the reduction of prejudice and emphasizes identity development and cross-cultural experiences. Finally fourth cluster of thought, societal equity, mandates that structural social transformation is required for democratic values to be realized. Ladson-Billings (1994) describes effective teachers of African-American children and indicates several characteristics of teaching that make them so successful. She presents the idea of culturally-relevant teaching and outlines strategies and goals for reaching diverse children. Grant (1993) argues for multicultural social reconstructionist methods, which aim to affirm diversity, while questioning injustice. His research shows that multicultural education should be responsive to the strengths and aspirations of various oppressed social groups and that workers should also be proactive in promoting social critique and activism. Banks' (1996b) model of multicultural education focuses on exposing the socially-constructed nature of reality and calls for a broad reconceptualization of how schools work. He urges a social action approach, as opposed to a "contributions" oriented or additive model (1994). Bennett's (1995) summary of the goals of multicultural education reflects these interconnected ideas, set forth by scholars in this area. Multicultural teaching must entail reaching students by connecting with their cultural, ethnic, linguistic, social, and other affiliations, and must empower liberatory and democratic practices. These various approaches to multicultural education should emphasize that prospective

teachers need a comprehensive view of the sources and consequences of diversity. While multicultural teaching required teacher to understand differences and to act appropriately, new tools arrived in schools. The problem is that these tools are not designed to consider the needs of diverse populations in schools, and teachers are not well-prepared to use these tools considering of diverse populations. Therefore, preparing teachers to have ICT skills and knowledge will not be enough, unless these same teachers are equipped with a sound understanding of ICT in order to serve a diverse population.

3. Critical theory

Critical theory is a type of intellectual inquiry that emerged during the 18th century in Europe. Critical theory represents the ideas of the European Enlightenment in order to create an ideal society which represents the highest values of human civilization. These values, in turn, will insure steady progress in the attainment of liberty, justice, prosperity, and contentment for all citizens. In other words, critical theory means inquiring into and questioning and challenging the passive acceptance of the status quo. According to Crenshaw (1988), "Critical scholars have attempted to analyze legal ideology and discourse a social artifact which operates to recreate and legitimate American Society" (p. 1350). Therefore, critical theory can be applied to any academic subject to inquire about culture, history, economy, politics, and religion. The main purpose of critical theory is the inquiry of problems, especially injustices and inequities.

4. Critical Pedagogy

Considering the aspects of critical theory, teacher education is a product of a political decision, a social formation, and a cultural transformation of publicly acceptable norms, and these aspects of teacher education should to be viewed critically. A critical examination of one's prior beliefs and personal history is crucial in teacher education because certain systems of values and attitudes are enacted and legitimated by those with political power, while other belief systems are marginalized, ignored, or negated. Freire (1970) calls this "conscientizacao" and indicates that only through naming the world can we begin to change it (p. 68). In addition to developing an understanding of the inequalities brought about by educational policy, curriculum, and literature, in the information age, teachers should be aware of the presentations of ideas that privileged groups embed in visual culture, the digital medium. Thus, require developing a commitment to identifying, challenging, and eliminating racism and other forms of oppression, presented with ICT is required. Seeing education as a place for liberation and emancipation (Freire, 1970), and the practice of freedom (Hooks, 1994), teacher education should engage a pedagogy that uncovers the anomalies of dominance, power, and inequalities. Therefore, critical pedagogy can be described as a political and practical effort that attempts to influence experiences that will affect the understanding of educational issues (Giroux & Simon, 1989). The focus of Critical pedagogy in teacher education is the preparation of citizens for participation in a democratic society. It would not be appropriate to provide a set of guidelines implementing critical pedagogy into a teacher education programs, but three tenets are important. These are reflection upon an individual's culture or lived experience, a critical look at one's world and society through dialogue with others, and transforming the society toward equality for all citizens through active participation in democratic procedures (Giroux & McLaren, 1996; Freire, 1970; Ladson-Billings (1994); Hooks, 1994). Giroux and McLaren, (1996) see the role of education as empowering students to become active citizens through moving from the classroom to the public sphere. It requires a change of teachers' dominant assumption, which reflects "high-level technicians carrying out dictates and objectives decided by experts far removed from the everyday realities of classroom life" (Giroux, 1988, p. 121). Teachers should not be the passive recipients of professional knowledge (Zeichner, 1983), or depositor of information (Freire, 1970). One of the ways to challenge teachers to develop liberatory identities in teacher education is to emphasize reflective practice within teacher education (Zeichner, 1995, Richardson, 1996). Reflective practices provide opportunities to newcomers in teacher education to critique their own pedagogy and examine their own assumptions and beliefs through dialog with old timers and teacher educators. The role of teacher educators in this context is to develop communities of learners in which reflective practice bridges the practice and theory. Drawing from this reflective aspect of communities of practice in teacher education, it is believed that ICT

can provide many opportunities to extend reflective practice, without limiting it in space and time to teacher education. However, at first, a member of participant of a reflective practice needs to understand the issue of society's current unequal cultural, economic, and political dynamics, which is at the core of critical pedagogy (Apple, 1989). Therefore, there is a need to critically examine the policy, curriculum, and materials implemented along ICT in the teacher education programs.

5. Developed Countries

Drawing from multicultural theory, critical theory, and critical pedagogy, the goal of ICT implementation into teacher education programs requires a critical inquiry. The following questions can guide a critical approach to ICT. How does the integration of ICT improve equality in schools? How does ICT empower liberatory teaching and learning in schools? How does ICT improve academic success for each and every individual, considering each individual's race, gender, and culture? The implementation of ICT in US teacher education programs represents a variety of approaches from the positivist ideal (development of core ICT skills) to critical pedagogy; however, implementation of ICT into teacher education programs is mainly driven by political decisions. These approaches in teacher education programs reflect political influence that can either focus on economic benefits or social benefits.

5.1. Economic Benefit

In general when implementing the integration of ICT, standardization has an effect on all teacher education programs. Many teacher education programs just chose the easiest way to prepare teachers with core ICT skills and knowledge by integrating one or two computer courses into the teacher education curriculum (Milken, 1999). On the other hand, teacher education programs are driven by the ideas of multiculturalism and critical pedagogies focus on the development of identity, with the support of virtual communities. One of the main arguments of the multiculturalism is that educational equity comes from equalizing classroom participation and approving of diversity. This aspect of ICT is generally supported by policy makers. However, this aspect of the ICT is referred to as providing access to every child in order to close the gap. This will insure the preparation of children for the work place and secure the future of the country. This statement can be found in many policy document (US National Educational Technology Plan, 2004). Within this view, the role of teacher education programs is to prepare teachers with ICT skills and knowledge so that they can teach ICT to their students. One of the supporting ideas that corresponds to multicultural theory is to close the gap between students from low income and high income families. It is believed that providing access to ICT in schools is not enough to promote equity. There is a need to understand students' interaction with ICT at home and at schools and a need to discover any differences that may foster educational inequalities brought about by ICT.

5.2. Social Benefit

In addition to the development of basic ICT skills such as writing, ICT can also provide opportunities for greater communication, to exchange projects around the world that help develop an understanding of multicultural sensitivity. Few studies tried to implement ICT into teaching within multicultural view (Cole, 1996; Cummins & Sayers, 1995). The current discourse shows the best intentions with regards to education and multiculturalism, with such themes as equitable peer-to-peer collaboration, global unity, the celebration of differences, and a geographic expedition around the world. This view is supported by the teacher education within the tradition of critical pedagogy; for example the Ohio State University offers courses on global education within its teacher education program. The ideal is to connect people around the world on a diverse platform (virtual communities), to celebrate equity and multicultural sensitivity. Networked conversations provide opportunities to foster equity, harmony, and access among people around the world, for example cross-cultural communication provides opportunities to students to develop a sense of different cultures. Therefore, the use of the Internet provides a potential link in classrooms to allow the exchange of cultural information and to critically address various problems, but it should promote an understanding of differences, not cultural hegemony.

6. Developing Countries

Even though the integration of ICT into teacher education may be a factor providing economic and social benefits, this may not be true for developing countries. In the developing world, the role of ICT is seen as a factor in economic growth, the development of human resources, and the transformation of education. However, developing countries are not technically capable of producing these technologies. Therefore, the increased use of these technologies, without production capability, will increase reliance on developed countries. Moreover, the integration of these tools into schools, without an understanding of their impact on local cultures can create serious problems. Therefore, integration of ICT into teacher education within the developing world extends our understanding of critical theories and critical multicultural pedagogies. Sociocultural disparities in the developing world and the possible effects of ICT on local cultures are discussed in the following. Underlying the disparities that exist in every country, whether developed or developing, ICT is not closing the gap between the elites and non-elites throughout the world. The most mentioned term, "Global Village", which is associated with Information Technologies is simply bridging the elites around the worlds, while poor people in all geographical areas are struggling to access basic services, such as food, shelter, education, etc. (Johari, 2004). Regarding ICT implementation, the sociocultural challenges in developing and low income societies involve two main issues. The first is the cultural effect of ICT on local cultures. The second is related to the difference between elites and non-elites, in terms of their access to quality education and ICT infrastructures.   It is believed that ICT is transferring the social and cultural values of western, Eurocentric societies to non-western societies. According to Moghaddam and Lebedeva (2004), "[i]nstructional technology conveys the carriers of western cultures from rules in gender relations to rules about marketplace behavior, but is also represents the technological superiority of West" (p. 84). Developing countries have underestimated the fact that technology also carries Eurocentric western ideologies and cultures. It is believed that developing countries should be cautious about the transmission of the western culture, along with the use of ICT. A second aspect of the integration of ICT in low income societies is related to its effect on elites and non-elites. According to Moghaddam and Lebedeva (2004), there is a lifestyle gap between elite and nonelite in low-income societies, so that these societies are characterized by a dualism that refers a dual economy (Moghaddam & Lebedeva, 2004). Moghaddam and Lebedeva stated that "in the context of lower-income societies, dualism refers to the coexistence of two sectors, one modern and the other traditional, in the same society" (2004, p.85). The authors argued that "modern and traditional sectors of lower income societies have evolved fundamentally different perceptions of social reality, in important part through the impact of the information-communication revolution, and particularly educational systems" (Moghaddam & Lebedeva, 2004, p. 85). In the low income societies, while ICT is available in elite schools and influenced the lifestyles of these groups, the non-elites in lower-income societies generally live in rural areas, work in agriculture, have few years of education, and have women who are more likely to be illiterate. These groups do not have access to modern communication technological systems and instructional technology. Therefore, the main benefit of ICT is to bring opportunities to the elites who develop international contacts and lines of communication while non-elites are struggling to access basic education. It seems that the main challenge in developing countries is to provide equal opportunities to all populations, in terms access to ICT, but current situations indicate that ICT implementation is increasing the gap between elites and non-elites, connecting the elites around the world and supporting the creation of a power relationship between people who have access to technology and those who have not. One important issue is to develop software, instructional material in local languages that can be accessible to all teachers, students, and other people. It is a fact that most of software educational material and web servers are produced in high income developed countries, especially in English-speaking countries. But, it can be difficult to find instructional material for every subject in the English language (Becta, 2005). Reliable and credible content in developing countries is one of the main issues. Computer programs are translated into other languages, but in many cases, it takes so long to make a translated version available. The use of these powerful tools can create western dominance in educational practice. An important aspect of ICT is communication. A centrally important element of this communication is language. The Internet represents English dominated communication. And most software is produced in English, appropriate to English users. Therefore, non-English speaking students around the world are trying to learn the dominant language in order to be prepared for the global job market. Willinsky (1998) identify the hegemony of English as "post colonization":

English may well dominate scientific literature, air traffic, control, and the business correspondence of many multinational corps. However, we have to watch whether the promotion of English as a world language carries within it the cultural, racial, and national legacy that I am associating with imperialism, and we have to insist that this legacy be explicitly addressed as part of a valuable and missing lesson for an education in language that is intent on not reproducing the colonial frame of mind. (pp, 205-206)

Therefore, the teacher education programs in developing countries should promote critical pedagogies that try to foster liberation, not domination, and which celebrate cultural and social differences promoting them on a national and international level. For this end ICT can bring many possibilities to promote liberation if only with the understanding of these technologies from critical, socio-cultural perspectives otherwise just imitation of these technologies into societies and schools empower domination of the western ideal.

7. Conclusion

ICT integration into society and school especially teacher education programs should not be seen as merely developing ICT infrastructures, increasing the percentage of people with Internet access and adding ICT content into school programs. The first thing to do is to provide opportunity to all people and student to access these technologies and programs, and more importantly there should be appropriate content available to them in their language. In addition, developing educative content in relation to school programs is required. ICT technologies should improve social equity and justice for all not for the elites. To this end ICT literacy content from critical, socio-cultural perspectives should be added into school curriculum in order to support. Briefly ICT integration into education in developing world should be seen as a vehicle of democratization and liberation not cultural and economic domestication.

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