

Overview of ict in education education essay

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This chapter introduces the study and provides relevant backgrounds. The first part of the chapter will introduce the topic and provide an overview of information, communication and telecommunication technology (ICT) in education. The middle part of the chapter will deal mostly with the problem statement, research questions and the aims and objectives of the study. Finally, the end part of this chapter will include the research organizations and the chapter breakdown of the study.

1. 0 Overview of ICT in Education

As governments have acknowledged a need for a shift in emphasis to knowledge-based economies, they started to promote the use of Information and Communications Technologies (ICT) in education (OECD, 1997). This has mostly been due to the pressures that technological change is having on the labour markets, whereby work practices are transformed and a need for more educated and flexible workforce is created (Meredyth, Russell, Blackwood, Thomas, & Wise, 1999). ICTs have become essential tools to access information, educate people and perform interactive instructional activities regardless of time and location (Mobbs, 2002). Based on the final report of the World Summit on the Information Society (WSIS, 2003), it was recommended that developing countries should be supported to make progress in access to ICTs and distance learning opportunities at a lower cost, so that all individuals pursue a sustainable progress to create an information society. The need to equip individuals with skills to use ICTs effectively and responsibly is a huge challenge to educators, since they are supposed to provide learners with relevant, up-to-date and high-quality technology knowledge before learners enter the labour market (Gibson,

O'Reilly, & Hughes, 2002). In view of facilitating the transition of Mauritius to a fully knowledge-based economy and society, one of the strategies of Government is the use of Information Technology (IT) as a supporting tool in education. It is expected that the use of IT in education will support the development of an efficient workforce for sustaining economic growth. It is intended to teach IT as a subject in itself at schools and to make use of IT for the teaching of subjects across the curriculum in primary and secondary schools (Ministry of Information Technology and Telecommunications, 2006)

1. 1 Problem Statement

Although investments in ICT for educational advancements purposes have been ongoing, the needs of teachers who will employ it in the classroom as part of the curriculum is overlooked (Niederhauser and Stoddart, 2001). ICT does not have an educational value in itself, but it becomes valued when teachers use it in the learning and teaching process. As Shakeshaft (1999) observes, ' just because ICT is present does not mean that students are using it'. The impact of ICT is strongest when used in a particular content area and further supported by use across the curriculum (Ward and Parr, 2010). Given that educators are the key persons to utilize ICT in the educational arena productively and to help integrate ICT into the curriculum, they need support and training to disseminate ICT integration into their classrooms Many pre-service teachers are still entering universities with a lack of ICT skills as well as a deficient enthusiasm toward ICT use in the classroom (Roblyer, 2002). Moreover, Gunter (2001) states that many higher education institutions are still failing to prepare pre-service teachers for technological experiences. Hence, it is unlikely that teachers will be able to

transfer their ICT skills to their students and encourage them to implement ICT when they themselves have negative perceptions towards the integration of ICT (Yildirim, 2000). According to Prensky (2001), contemporary students are digital natives as they have using technology since their childhood and they are all "native speakers" of the digital language of computers, video games and the Internet. On the other hand, those who were not born into the digital world but have adopted technology at a later stage of their lives are called digital immigrants. Digital native students and digital immigrant teachers lie at the center of several educational problems we're facing at present. 'Digital natives' brains are likely to be physically different as a result of the digital input they received while growing up' (Prensky, 2001). Digital immigrant teachers assume that learners are the same as before and they have not changed, hence, the assumption that the same teaching strategies will be as effective with today's digital natives. However, according to Prensky (2001) this assumption is no longer valid. Moreover, digital immigrants don't believe that their students can successfully learn with educational tools such as television (Prensky, 2001). According to Prensky (2001) digital natives are used to receiving information really fast, they like to multi-task, they prefer graphics before texts, they function best when networked, they are motivated with frequent rewards and they prefer games to serious work. Thus, Prensky (2001) proposes that digital immigrant teachers should devise new methodologies for all subject areas, at all levels, while using students as their guides. Rogers (1995) postulates that technology adopters' perceptions are crucial to innovative decision process. He proposes that studies should focus on users' attitudes toward ICT integration in the early stages of

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technology implementation. Perceptions are considered the cognitive components of attitudes and the literature shows that pre-service teachers' perceptions influence intentions which in turn influence behaviour (Ma et al., 2005). State secondary schools and state funded private secondary schools in Mauritius are still using the same instructional methods they have always been using. Despite the fact that the government has been making effort to implement ICT in secondary schools, the instructional methods have been fairly been the same. Secondary schools definitely have more computers and computer laboratories available. However, their use in reality is limited to exclusively to students undertaking computer studies, while other subject areas have not embraced technology yet.

Research Questions

The following research questions have been formulated to better understand why secondary schools in Mauritius have not yet embraced instructional technologies. We will be concentrating on the perceptions of educators on instructional technologies and school administrators' views. To what extent educators have an understanding of instructional technology? Are educators aware what instructional technologies are available? Do educators believe in the effectiveness of instructional technology tools? Do they see instructional technologies difficult to use? Is there a difference among male and female educators in their perception of the use of instructional technology in education? Is there a difference among junior and senior educators in usage of internet? Do administrators of the college consider instructional technology as an effective way of achieving the goals they have set? How

many educators intend to use instructional technology in the classroom?

What barriers are educators faced with when using technology?

Aim

Based on the problem statement and the research question, the aim of this study is: To demonstrate the importance of teachers' perceptions in implementing instructional technologies in education.

Objectives

To conduct a detailed literature review on instructional technology and its implementation. To investigate the perception of educators of secondary schools in implementing ICT as a medium of instruction. To examine whether administrators and educators of secondary schools are familiar with educational technology tools. To explore barriers to the proper integration of instructional technology. To propose recommendations regarding the possible ways of implementing instructional technology at secondary schools

Research Area

The Town of Curepipe is located in the district of Plaines Wilhems on an area covering 23.8 km². It is found on the central of the plateau at an altitude of 1,543 meters. It is the nearest town to the airport and thus the nearest town to the southern part of Mauritius. Curepipe is easily accessible to the capital Port-Louis and other towns thanks to the new motorway passing on the outskirts of Curepipe. Curepipe is categorized as Zone 3 by the Ministry of Education and Human Resources. There are four state colleges, namely Royal College of Curepipe, Forest Side state secondary school (Boys) and Forest Side state secondary school (Girls) and Dunputh Lalla State secondary

school (SSS). However, there are far more private colleges which totals to eleven and they are namely; Curepipe College, Mauritius College, Hindu Girls College, Imperial College, Loreto College, Notre Dame College, Presidency College, St Joseph College, Renaissance College, Full Day Samputh Secondary School and St Patrick's College.

Chapter Breakdown

Chapter 1: Introduction. This chapter provides an entry point into the document, as well as relevant backgrounds. It provides a problem statement, the research question, and the purpose of the study. A background of the research area is also provided. Chapter 2: Literature Review. This chapter provides an overview of relevant academic studies on instructional technologies; e-learning, blended learning, Open Educational Resources (OER) and how to properly implement instructional technologies along with appropriate leadership styles. It also provides an overview of the Mauritian educational sector and its evolution over the years. Chapter 3: Methodology. This chapter provides a discussion of the structure of the dissertation research, including the method utilized for analysis of the data collected. Chapter 4: Results & Discussion. This chapter reports the data collected from surveys & interview and analyzes the data reported in order to account the results of the research. Chapter 5: Conclusions & Recommendations. This chapter answers the original research question by using the analysis of the data presented in Chapter 4. It then goes on to discuss the implications of the data, summarize the dissertation as a whole, and provide recommendations for future research.