

Information and Communication Technology as an aid to Learning

[Oyewole M. O]

Abstract— Information and Communication Technology (ICT) have taken a central position in all sphere of human endeavor. ICT which is refer to any electronic means of capturing, processing, storing and disseminating information now serves as the backbone of societal development in all ramification. This Paper deliberate on using ICT as an aid to learning . It uses a method in Computer science by developing a window based application software that convert text to voice such that information from textbook or material in softcopy can be harnessed without sitting down to read.

Keywords— Information and Communication Technology, Software development and learning.

Introduction

Information and Communication Technology (ICT) have become an indispensable part of life. Information and Communication Technology (ICT) plays a vital role in the development of any nation. It has been an instrument for achieving social, economic, educational, scientific and technological development(Adedeji, 2010).

ICT has changed the way people communicate, learn and conduct business. This sentiment is stressed by Allen (2011) who points out that the application of Information Communication Technology (ICT) is not only emphasized in corporative business and the industrial sector, but it is an essential part of education at all levels.

According to Daniels (2002) ICTs have become within a very short time, one of the basic building blocks of modern society. Many countries now regard understanding ICT and mastering the basic skills and concepts of ICT as part of the core of education, alongside reading, writing and numeracy. Sometimes people think that ICT only refers to the use of computer and its applications. This is not true as ICT encompass a wide range of other things apart from computer system. This as opined by Pelgrum and Law (2003) which state that near the end of the 1980s, the term ‘computers’ was replaced by ‘IT’ (information technology) signifying a shift of

focus from computing technology to the capacity to store and retrieve information

ICT is considered a powerful tool for educational change and reform. A number of previous studies have shown that an appropriate use of ICT can raise educational quality and connect learning to real-life situations (Lowther, et al. 2008; Weert and Tatnall 2005).

Learning is acquiring new or modifying and reinforcing existing knowledge, behavior, skills, values or preferences and may involve synthesizing different types of information. It does not happen all at once, builds upon and is shaped by what we already know. To that end, learning may be viewed as a process rather than a collection of factual and procedural knowledge. (<http://en.wikipedia.org/wiki/Learning>) . Student at all level use mobile phones almost every time to do one thing or the other. ICT

Statement of the problem

It has been discovered that there is a drastic increase in the failure rate of students across board. The situation of poor performance has become so bad that students fear examination like a dreaded plaque, for most students, the fear of examination is the beginning of wisdom. It is believed that student’s interest to learn can increase with the use of ICT, hence this paper is aimed to bring out the way in which ICT can be used to aid learning.

Literature review

ICT has helped people in different ways when it comes to learning. Students, teachers, etc have used ICT in one way or the other to improve their learning skills. Few ways ICT have added to learning are discussed below:

According to Abimbade (2005), the world of technology has continued to grow and the world has become a global village. Kumar and Kaur (2005) state that the current information revolution and increasing impact of information and communication technologies have modernized the process, learning and research in most universities. Several studies provide details about ICT adoption. Ramzan (2004) observes that expert systems, wireless networks, virtual collections, interactive web interfaces, virtual reference services, and personal web portals have brought changes since the start of

the new millennium. Ramzan (2004), in his study, observed that librarians in Pakistan were not prepared to embrace the changes brought by information and communication technologies. Most of them were not even sure about ICT applications in their libraries. They were also uncertain about the benefits of these new technologies for their organizations since they have little knowledge of ICT. ICT use in teaching and research has become the norm across tertiary institutions where students have been identified as stakeholders in its development and implementation (Ling et al., 2001; Petrova and Sinclair, 2005; Lee and Nguyen, 2005).

Methodology

The windows based application was developed with C# in Visual Studio 2010. C# is an elegant and type-safe object-oriented language that enables developers to build a variety of secure and robust applications that run on the .NET Framework. You can use C# to create Windows client applications, XML Web services, distributed components, client-server applications, database applications, and much, much more. Visual C# provides an advanced code editor, convenient user interface designers, integrated debugger, and many other tools to make it easier to develop applications based on the C# language and the .NET Framework. (<http://msdn.microsoft.com/en-us/library/z1zx9t92.aspx>)

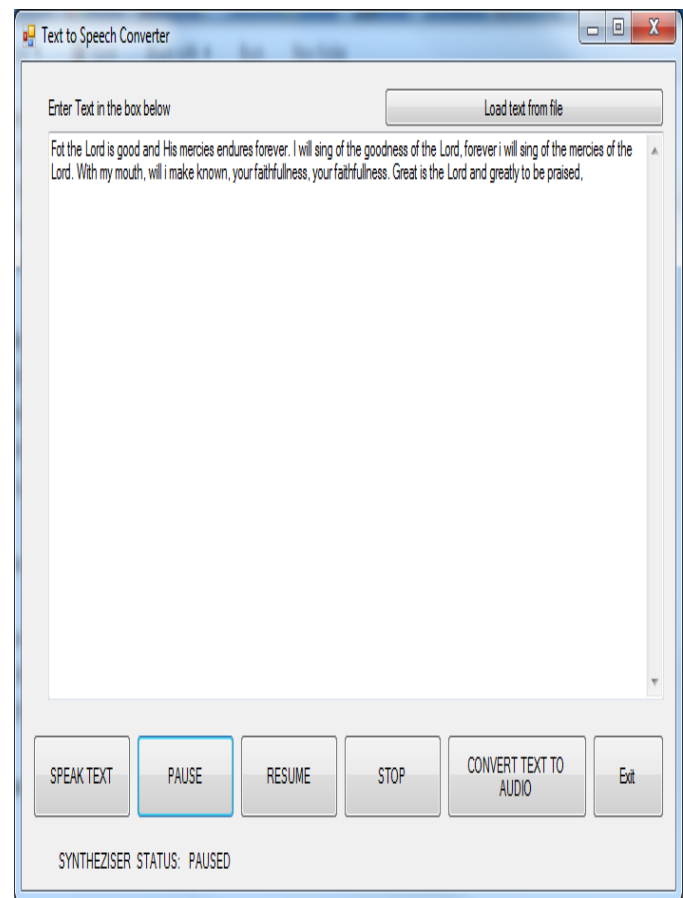
C# has all the features of any powerful, modern language. In C#, the most rapid and convenient way to create your user interface is to do so visually, using the **Windows Forms Designer** and **Toolbox**. Windows Forms controls are reusable components that encapsulate user interface functionality and are used in client side Windows based application. (http://csharp.net-informations.com/gui/gui_tutorial.htm)

There different component used in this software that makes the Graphic User Interface appealing and easy to use. A control is a component on a form used to display information or accept user input. To design an interface in Visual studio in 2010 using C#, there are two options that are available, which are :

- Windows Form Designer.
- Windows Presentation Foundation Designer

It should be noted that the designer used in this software is Windows Form Designer.

The user interface for this software is shown below.



The lists of components and their function are given below

- a) Load Text from file: The user need to load the text to be spoken and converted to what can be listen to on phone from file.
- b) Speak Text : Once this component is clicked, the computer will start to read the loaded text file
- c) Pause: when the user is listening to this on a system, he has the option to pause the software when he is temporarily busy
- d) Resume : as the name implies, this button is used to start the software to speak from where it was when it was paused.
- e) Stop : This stops the software from speaking text loaded from file.
- f) Convert to audio: This converts the file loaded into an audio file that can saved on a mobile phone and can be listened to anytime, anywhere
- g) Exit : This closes the software when it is clicked.

Conclusion

The importance of ICT as an aid to learning cannot be over emphasized. We all agree that reading sometimes can be tedious and energy sapping especially in this era of several new technological innovations and the race to accumulate devices that cater more for entertainment and electronic forms of social interactions. A software such as this will enable students, Lecturers or anyone who needs to access information be able to incorporate them into some of the uses of their devices and have such information available to them on the go. However this is not advocating for the complete abandonment of physical books or actual reading but another avenue to bring learning to the fore as one of the activities that can easily be carried out on the move; an innovative alternative to the traditional methods of learning.

About Author (s):



We all agree that reading sometimes can be tedious and energy sapping especially in this era of several new technological innovations and the race to accumulate devices that cater more for entertainment and electronic forms of social interactions. A software such as this will enable students, Lecturers or anyone who needs to access information be able to incorporate them into some of the uses of their devices and have such information available to them on the go

References

- Abimbade A (2005). A welcome address at the opening ceremony of elearning 2005 conference organized by e-learning Network of Nigeria (ELNN).
- Adedeji OA (2010). The Development of Modern Information and Communications technology in Ibadan: Creative Educational Publications Ltd. p. 58.
- Allen MC (2011). Third-Year Students' Perceptions of the Use of ICT at a Teacher Training College in Namibia. Unpublished M. Phil Theses submitted to the Department of Curriculum Studies, Stellenbosch University, Namibia
- (2001). The Effectiveness of Models of Flexible Provision of Higher Educations. Department of Education, Training and Youth Affairs, Common Wealth of Australia.
- Colleges of Punjab India. A case study. *Webology* 2(4):1–22.
- Daniels J.S. (2002) "Foreword" in *Information and Communication Technology in Education—A Curriculum for Schools and Programme for Teacher Development*. Paris:UNESCO.
- Kumar R, Kaur A (2005). Internet and its use in the Engineering
- Ling P, Arger G, Smallwood H, Toomey R, Kirkpatrick D, Barnard Lowther, D. L., Inan, F. A., Strahl, J. D. and Ross, S. M., 2008. Does technology integration work
- Pelgrum, W. J., Law, N. (2003) "ICT in Education around the World: Trends, Problems and Prospects"UNESCO-*International Institute for Educational Planning*. Available: www.worldcatlibraries.org/wcpa/ow/02d077080fcf3210a19afeb4da09e526.html.
- Ramzan M (2004). Does level of knowledge impact Librarians' Attitude towards Information Technology (IT) Applications? 2nd International CALIBER. 2004, Dew Dell: 11–13 February.
- when key barriers are removed?. *Educational Media International*, vol. 45, pp.195-213.
- (<http://en.wikipedia.org/wiki/Learning>)
- (<http://msdn.microsoft.com/en-us/library/z1zx9t92.aspx>)
- (http://csharp.net-informations.com/gui/gui_tutorial.htm)