CHAPTER - 1

INTRODUCTION

CHAPTER-1

1.0.0 INTRODUCTION

Today's children are growing in a globalized world where technology is accessible by majority. The rapidly changing world wants the students to improve their information gathering and analysing skill, collaboratively working skill, sharing, and publishing their ideas and more importantly learning from one another. A student now can learn physics from the best teachers of the world through computer and internet. They can get exposure to good practices from different corners of world. The expectations from the students are changing and the emphasis is not on the rote learning as it was before. Thus, in this dynamic world, it is very essential to include ICT properly in the school curriculum and the administrators are increasingly doing that too. But are they doing enough to leverage the technology?

ICT (information and communication technology) is a buzzword in teaching and learning since early 21st century. The technological tools and resources available for teaching and learning have increased substantially in the last few years (Lenhart, Madden & Hitlin, 2005). From the last year, the demand for technology has increased substantially in education. But the increasing demand, the implementation and utilization of ICT puts some bigger questions before us.

Public school teachers in the 21st century is constantly directed to reform their practices and incorporate new ideas and methods that may or may not better educate students. Trilling and Fadel (2009) suggested that reforming education to include more collaboration and technology Oriented activities would better prepare students for the 21st century. Teachers and school administrators are continuously trying to improve their ability to integrate technology into the classroom as indicated by the large number of research articles on implementing technology in schools. institutions spend money and resources each year in an effort to produce a more technology-rich learning environment. Educators do this partly because they are aware that today's students are growing up as part of a global society that is connected by computers and the Internet. This new and rapidly changing environment has the potential of giving students the opportunity to develop their

information gathering and analysing skills, work collaboratively, share and publish their ideas, and most importantly, learn from one another.

However, some teachers tasked to utilize the 21st Century Skills and Technology, Pedagogical and Content Knowledge (TPACK) frameworks are not always aware, able, or willing to integrate the tools (Anthony, 2012; Downes & Bishop, 2012; Downes & Bishop, 2015; Berrett, Murphy, & Sullivan, 2012). The Partnership for 21st Century Skills (2015) described assessments of 21st Century Skills for students and found their skills lacking. There is evidence that technology integration is not occurring given the technical and financial resources being supplied to local school districts (Hixon & Buckenmeyer, 2009; Kopcha, 2012; Mishnew & Anderson, 2015). Koehler and Mishra (2010) explained that teachers struggle to integrate technology with content knowledge and pedagogy, instead opting to use technology in very basic ways like typing within a word processing program rather than writing with pencil-and-paper.

Some educators argue that we are having difficulties effectively implementing technology-rich learning environments. Cuban (2001) cautioned that in many cases technologies are not being implemented in ways that increase student learning. He argues that technologies are placed into the classroom with little guidance given to teachers on how to effectively integrate the new tools into the curriculum. According to Cuban (2001), this misguided use of technology seems to be a pattern that tends to repeat itself. Since the radio was first introduced into the classroom, technology has been underused or Misused. Presently, teachers continue to teach and students continue to learn the same way as they did prior to computers in their classroom. Teachers are given little, if any, opportunity to learn how to change the way they teach using technology. And in some instances, teachers who think they are integrating technology effectively are teaching exactly the same except that they now write on an expensive whiteboard instead of a chalkboard. In addition to lack of teacher preparation, Cuban (2001) states that the education system has not changed systemically enough to allow teachers to use technologies to their fullest potential. In a recent blog about MOOCs (Massive Open Online Courses),

in a blog entry, Cuban (2014) said the following about how K-12 teachers currently use technology devices in their classroom, Nonetheless, most K-12 teachers use these devices in different ways every week. Lessons using software on, say, the five desktops in the room or the 30 laptops or tablets on the cart, are common across elementary and secondary schools. Yet these powerful computers have hardly altered the prevailing ways of teaching that have gone on for years.

1.1.0 BACKGROUND OF THE STUDY

It has been realized that the use of computer in schools for teaching and learning is helpful to acquire knowledge, develop a critical and creative mind, capitalize on the opportunities driven by the explosive growth of information, knowledge and technology (Kumar, and Roseand D'Silva, 2008). Today, improved communication technology has made time and space less complex. It has been observed that this modem age is the age of information explosion in which an individual wants to explore the information system.

Teachers and school administrators are continuously trying to improve their ability to integrate technology into the classroom as indicated by the large number of research articles on implementing technology in schools. Institutions spend money and resources each year in an effort to produce a more technology-rich learning environment. Educators do this partly because they are aware that today's students are growing up as part of a global society that is connected by computers and the Internet. This new and rapidly changing environment has the potential of giving students the opportunity to develop their information gathering and analysing skills, work collaboratively, share and publish their ideas, and most importantly, learn from one another.

Koehler and Mishra (2010) explained that teachers struggle to integrate technology with content knowledge and pedagogy, instead opting to use technology in very basic ways like typing within a word processing program rather than writing with pencil-and-paper.

According to the National Technology Education Plan (2005), students have mastered the Internet away from school and have outpaced their teachers in terms of the computer's potential use as an educational tool (Jaillet, 2004). A shift of knowledge has occurred when it comes to technology. Prensky (2001) suggests that teachers over the age of forty are "digital immigrants" while the students they teach are "digital natives." Rather than immigrants, Palfrey and Gasser (2008) define these individuals as "digital settlers", individuals who grew up in an analog world, but have been instrumental in creating the digital world. Regardless of immigrant or settler, these individuals tend to continue to use analog communication such as mailing bills rather than on-line payments. These individuals are teaching the digital generation, the ones who live by texting, blogging, Facebooking, iPhones, iPods, and more recently iPads.

Is this digital disconnect merely an age difference between teachers and students? There has always been some sort of societal disconnect between the generations which may be visible within education. Lancaster and Stillman (2002) wrote about the differences between the Traditional (born Pre-1946), Baby Boomers (born 1946-1964), Generation X'ers (born 1965-1981) and the Millenials (born 1982-2000). They discussed how each of the generations not only grew up in separate historical times, but also hold different outlooks on work and life.

1.2.0 RATIONALE OF THE STUDY

Technology goes beyond the classroom. It is found in our everyday lives and is increasingly becoming a job requirement throughout the world. In order for the next generation to compete within this global stage, students will be required to know and use various digital enhancements. Children spend the vast majority of their day in a classroom. In order for the students to learn how to effectively utilize technology, teachers must first incorporate its use into content. Findings from this study will enable division leaders the opportunity to better understand the barriers teachers perceive to integrating technology. Through investigating these barriers and teachers' perceptions of technology, technology coordinators and administrative

leaders will have the potential to discuss these barriers and determine appropriate ways to increase technology use in their schools.

The researcher is curious enough to know the opinion and perspectives of the secondary school teachers and student teachers on the integration of ICT in the classroom leaning. India is a comparatively backward country with less ICT resources and equipment in the secondary level of government schools. There is a general perception that private school teacher uses ICT more in classroom than government school. The researcher wants to analysis the different viewpoint of secondary school arts and science teachers on the uses and importance of ICT in the classroom. The researcher wants to know the opinions of secondary school male and female teachers. In this present study the researcher will use qualitative research method and questioners' tool for the collection of data for her research in her own area. If these assumptions are true than this will leads to other research work to understand the reason behind it.

1.3.0 STATEMENT OF THE STUDY

The problem of the present study has been stated as: ": "THE REFLECTION OF SECONDARY SCHOOL TEACHERS ON THE INTEGRATION OF ICT IN TEACHING-LEARNING PROCESS"

1.4.0 OPERATIONAL DEFINATION OF KEYTERMS

Secondary school teacher: Secondary school teacher refer to the teachers in secondary public or private schools in one or more subjects at the secondary level, such as English, Mathematics, or social studies.

In this present study, the researcher will use questionnaire and interview the teachers/student teachers for the purpose of data collection.

Information and communication technology (digital technology): Information and Communication Technologies (ICTs) is a broader term for Information Technology (IT), which refers to all communication technologies, including the internet, wireless networks, cell phones, computers, software, middleware, videoconferencing, social networking, and other media applications and services.

Professional development: Professional development is the set of tools, resources, and training sessions for educators to improve their teaching quality and effectiveness. These resources allow instructors to further their knowledge in their subject area and allows for mentorship and the opportunity to learn new teaching techniques.

Consistent Technology Integration: For the purposes of this study: the utilization of technology in the classroom to enhance student learning three to five times per week.

Digital Divide: A gap between those that use technology and those that do not (Prensky,2001).

Digital Immigrant: Not a native user of technology as the digital world did not exist when they were born; usually someone born prior to 1980 (Prensky, 2001).

Digital Native: Individuals born after 1980 into the digital world (Prensky, 2001). Digital Settlers: Individuals that have grown up in an analog world but assisted in the creation of the digital world (Palfrey and Gasser, 2008).

Digital Wisdom: Acceptance of digital enhancements that aid in critical thinking and problem solving (Prensky, 2009).

Technology: For the purposes of this study: Digital media including but not limited to, computers, electronic whiteboards, LCD displays, digital cameras, and software.

Technology Integration: Within the classroom, students are able to select technology tools to help them obtain information, analyse and synthesize the information, and present it professionally (International Society for Technology in Education, 2008).

1.5.0 OBJECTIVE OF THE STUDY

- To study the perspectives of secondary school science teachers about usage of ICT in classroom.
- To study the perspectives of secondary school arts teachers about usage of ICT in classroom.

- To investigate teacher's perspectives with respect to their gender, age, and experience.

1.6.0 HYPOTHESIS

- There is no significant integration of technology in the science classroom learning by the science teacher.
- There is no significant integration of technology in the arts classroom learning by the arts teacher.
- Gender, age, and year of experience are not a considerable factor for the integration of technology in classroom learning.

1.7.0 DELIMITATION OF THE STUDY

- The present study being exploratory in nature has following delimitations:
- The qualitative study will examine the attitude, perceptions, and beliefs of secondary school teachers.
- The population of the study will be delimited to small sample size with employed teacher and student teachers.
- The third gender will be excluded.
- This study will be delimited to five Secondary school.
- The study will be delimited to two Private schools and three State Govt. schools.