

ICT FOR QUALITY EDUCATION

Prof. Khan Saquib Ahmad
Research Scholar-Shri. J.J.T University

Prof. Khan Mohammed Imran
Lords Universal College (Goregaon)

ABSTRACT:

ICT, or information and communications technology (or technologies), is the infrastructure and components that enable modern computing. Information and Communication Technology (ICT) or IT can be utilized for the education sector. Education includes online, distance and part time education. There are unlimited applications of ICT in the real world. ICT can play great role in formal and non-formal forms of education. This paper presents the study of ICT and its tools, examines certain important issues related with the effective implementation of ICTs in all levels of education and provides suggestions to address certain challenges that would help in the implementation of ICTs in education and simultaneously increasing Quality of education.

KEYWORDS:

ICT, IT, Education, Quality Education.

OBJECTIVE:

- 1) To study and know the concept of ICT and its tools.
- 2) To study and understand the curricula for ICT in education.
- 3) To know what is ICT in Education.
- 4) To find out the key challenges in integrating ICTs in education.

INTRODUCTION:

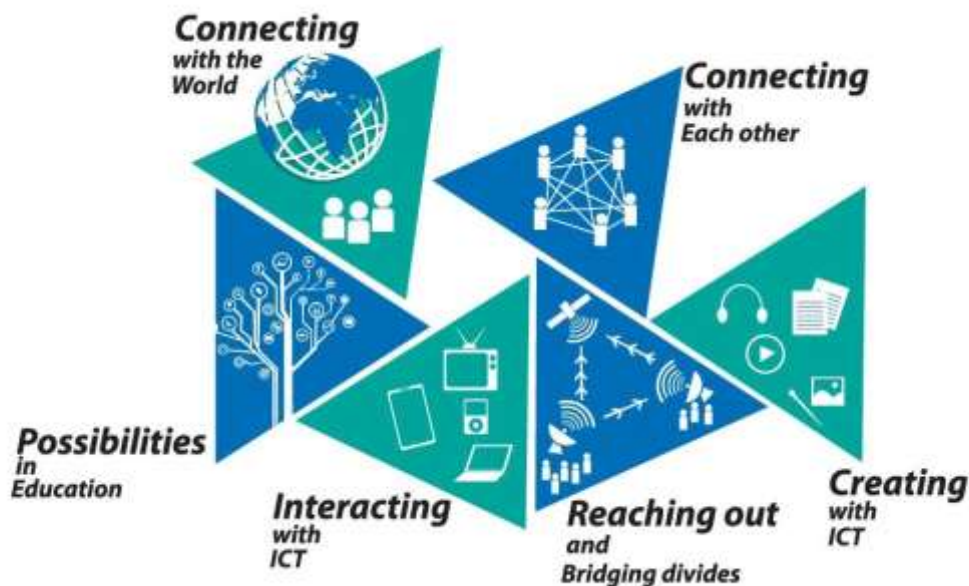
UNESCO defines ICT as "the scientific, technological and engineering disciplines and the management techniques used to handle transmit information with men and machines".

According to the Digital video technical Glossary "ICT is the computing and communications facilities and features that support teaching, learning and a range of activities in education." The UK National Curriculum document in 2000 defines "ICT as the technology used to handle information and aid communication"

According to the official IBM Glossary "ICT is the use of computer based information systems and communications systems to process, transmit, and store data and information."

The UK Governments ICT year in 1972 describes "ICT as a collective terms involved in handling and transmitting information. It includes computing, telecommunications and microelectronics

CURRICULA FOR ICT IN EDUCATION:



The present curricula for ICT in Education aims at realizing the goals of the National Policy of ICT in Schools Education and the National Curriculum Framework.

Given the dynamic nature of ICT, the curricula, emphasizing the core educational purposes, is generic in design and focuses on a broad exposure to technologies, together aimed at enhancing creativity and imagination of the learners.

For the teacher, it is an initiation into:

- Exploring educational possibilities of technology,
- Learning to make right choices of hardware, software and ICT interactions, and
- Growing to become a critical user of ICT.

For the student, it is an initiation into:

- Creativity and problem solving,
- An introduction to the world of information and technologies, and
- An opportunity to shape career pursuits.

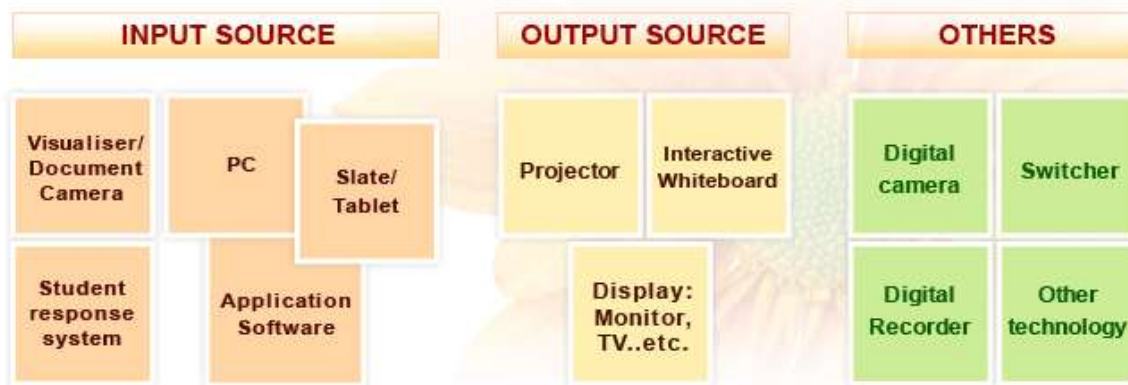
Teachers who are already proficient in ICT can fast track through the course.

WHAT IS ICT IN EDUCATION?

"ICT" is the Information and Communication Technologies. "ICT in Education" means "Teaching and Learning with ICT".

Educational ICT tools can be divided into 3 categories: Input source, Output source and others.

See the following graph :



Worldwide research has shown that ICT can lead to improved student learning and better teaching methods. A report made by the National Institute of Multimedia Education in Japan, proved that an increase in student exposure to educational ICT through curriculum integration has a significant and positive impact on student achievement, especially in terms of "**Knowledge Comprehension**" · "**Practical skill**" and "**Presentation skill**" in subject areas such as mathematics, science, and social study.

However, you can see that there are many education technology solutions provided in the world which may cause confusion among educators about how to choose the right ICT solution. Let's have a look at the advantages and disadvantages of ICT tools for education and discover what kind of education ICT solution is suitable for your school needs.

3 MAIN ADVANTAGES OF ICT TOOLS FOR EDUCATION:

- Through ICT, images can easily be used in teaching and improving the retentive memory of students.
- Through ICT, teachers can easily explain complex instructions and ensure students comprehension.
- Through ICT, teachers are able to create interactive classes and make the lessons more enjoyable, which could improve student's attendance and concentration. .

3 MAIN DISADVANTAGES OF ICT TOOLS FOR EDUCATION:

- Setting up the device can be very troublesome.
- Too expensive to afford.
- Hard for teachers to use with a lack of experience using ICT Tools.

ICT TOOLS:

Information Communication Technology **tools** are digital infrastructures such as; computers, laptops, desktops, data projector, software programs, printer's scanners and Interactive teaching box.

KEY CHALLENGES IN INTEGRATING ICTs IN EDUCATION:

Although valuable lessons may be learned from best practices around the world, there is no one formula for determining the optimal level of ICT integration in the educational system. Significant challenges that policymakers and planners, educators, education administrators, and other stakeholders need to consider include educational policy and planning, infrastructure, language and content, capacity building, and financing.

LIMITATION:

The topic is so vast but due to certain limitations couldn't express in depth. Due to certain situations could not collect primary data.

METHODOLOGY:

Primary data was not collected for the research paper.

Secondary Data

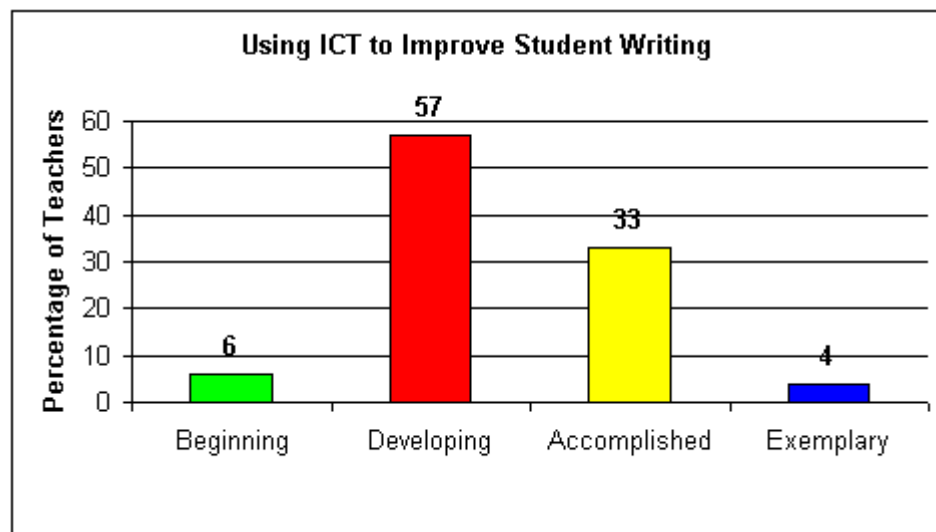
This secondary data has been collected. For this purpose, various magazines and journals have been used as it is a conceptual paper. Thus, the focus is to know more about the concept, its application and the impact on economy via other parameters. Therefore, qualitative and quantitative data have been used.

Analysis of Teachers' Self-reported Pedagogical Skills in Integrating ICT

Using Educational Software

Most teachers (86%) place themselves at either the Developing or Accomplished level for educational software use. These teachers use educational software as an instructional supplement or to provide experiences otherwise unavailable to students. Of all the 10 pedagogical skills surveyed, the highest percentage of teachers place themselves at the accomplished level (43%) and at the Exemplary level (7%) for the use of educational software.

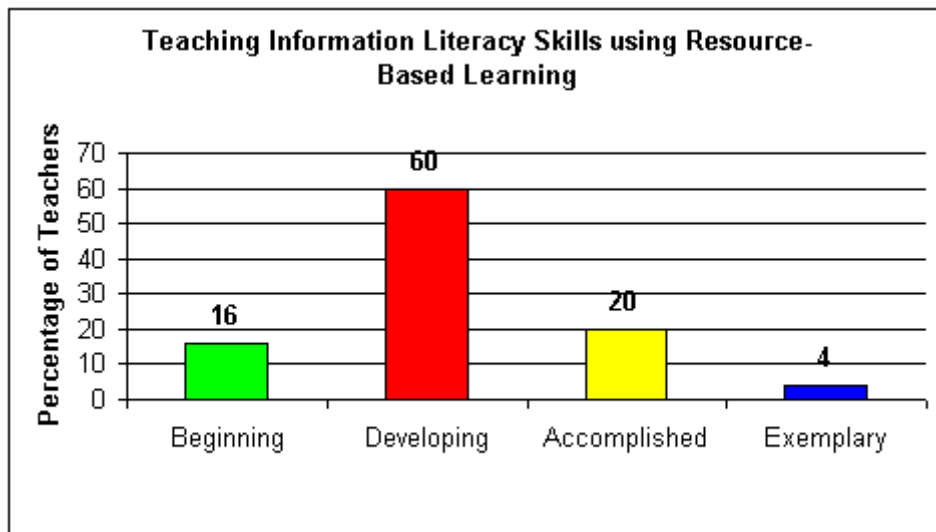
Using ICT to Improve Student Writing



More than half the teachers (57%) place their pedagogical skill at the Developing level of using ICT to improve student writing. At this level, even though students are not expected or encouraged to compose or edit using the computer, teachers ask that the final draft of some student writing assignments be word processed. One third of teachers place their skills at the accomplished level. At the Accomplished level, teachers help students use the computer in all phases of the writing process. They also use technology to help students share their work with a wide variety of reading audiences. Only 6% of teachers said they are

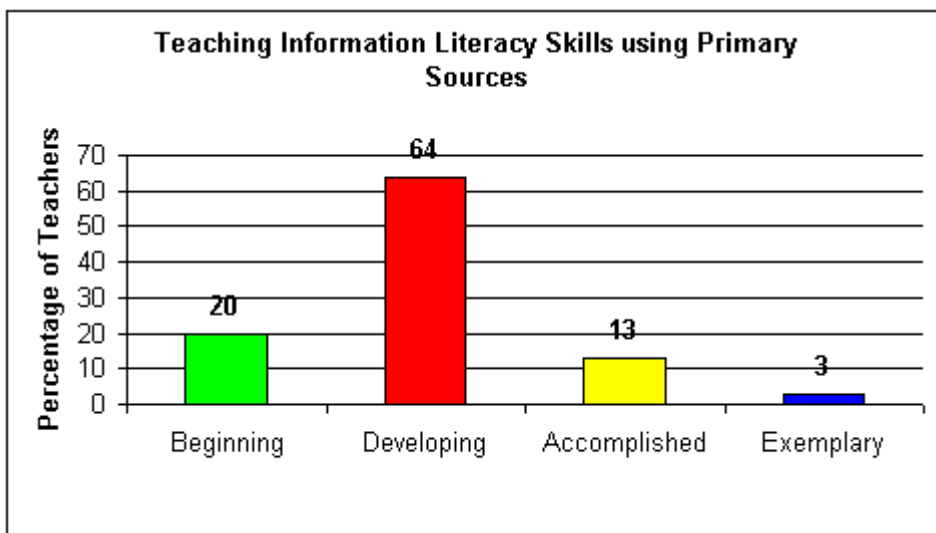
not familiar with any technologies that would allow them to help students improve their writing skills (Beginning level).

Teaching Information Literacy Skills using Resource-based Learning



Sixty percent of teachers respond that they are at the Developing level of teaching information literacy skills using resource-based learning. These teachers have students use electronic resources in their resource-based learning projects. Twenty percent of teachers collaborate with the teacher-librarian or other classroom teachers and design resource-based learning projects that require higher-level thinking skills, electronic information sources, and the use of computer productivity software (Accomplished level). However, 16% of teachers are not familiar with the term information literacy and do not yet know why such skills are important (Beginning level).

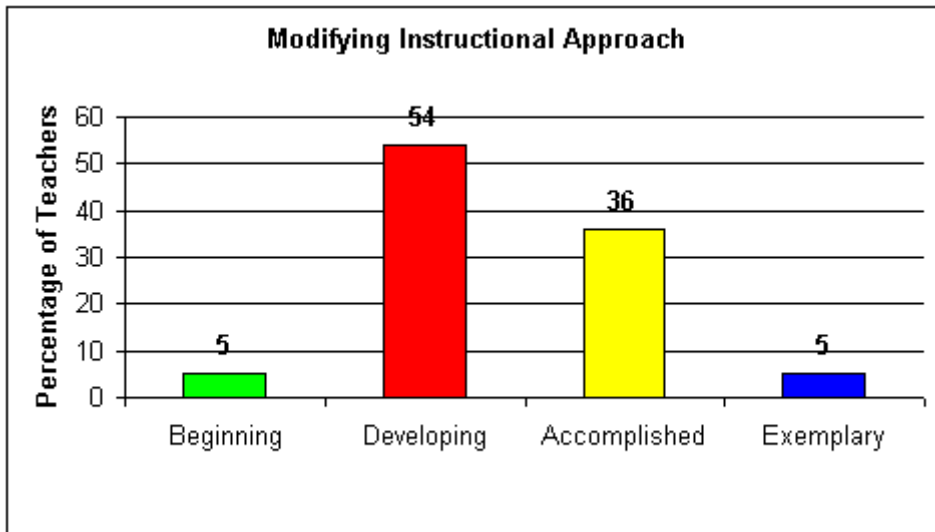
Teaching Information Literacy Skills using Primary Sources



Sixty-four percent of teachers place themselves at the Developing level for teaching information literacy skills using primary sources. As part of their instructional strategies, these teachers include student projects that require collection and analysis of original data. They can generally predict the outcome of their students' experiments or surveys. Twenty percent of teachers expect their students to do research using only secondary resources such as books, magazines, or reference materials (Beginning level). Only 13% of

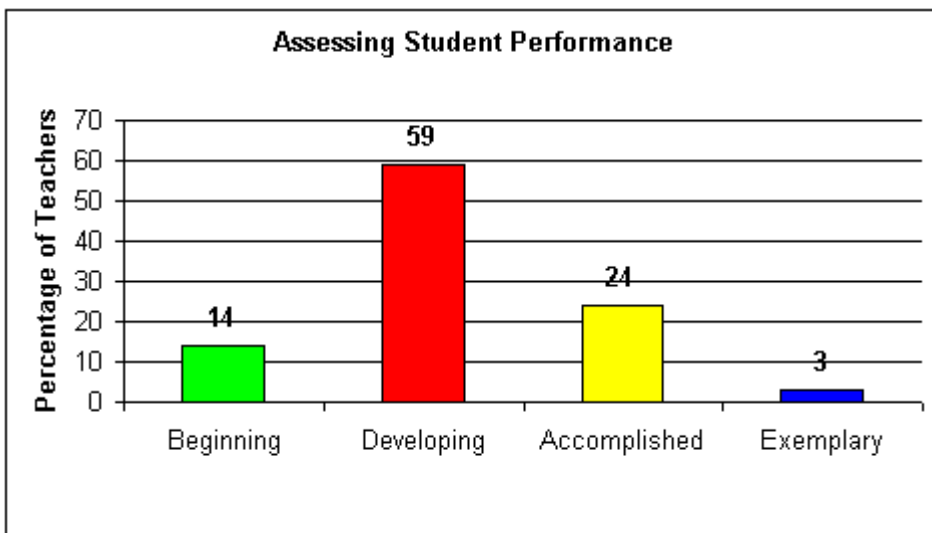
teachers said they teach their students how to use spreadsheets and databases to record, organize, analyse, and communicate their collection of original data (Accomplished level).

Modifying Instructional Approach



More than half (54%) the teachers place themselves at the Developing level of pedagogical skill at using technology to modify their instructional approach. These teachers have initiated units or projects that have a technology component, but most use of technology by their students takes place in a computer lab rather than directly in the classroom. More than a third (36%) of the teachers report using a variety of instructional delivery methods and student grouping strategies routinely throughout the year. They also use small groups working collaboratively in learning centres on classroom computers (Accomplished level).

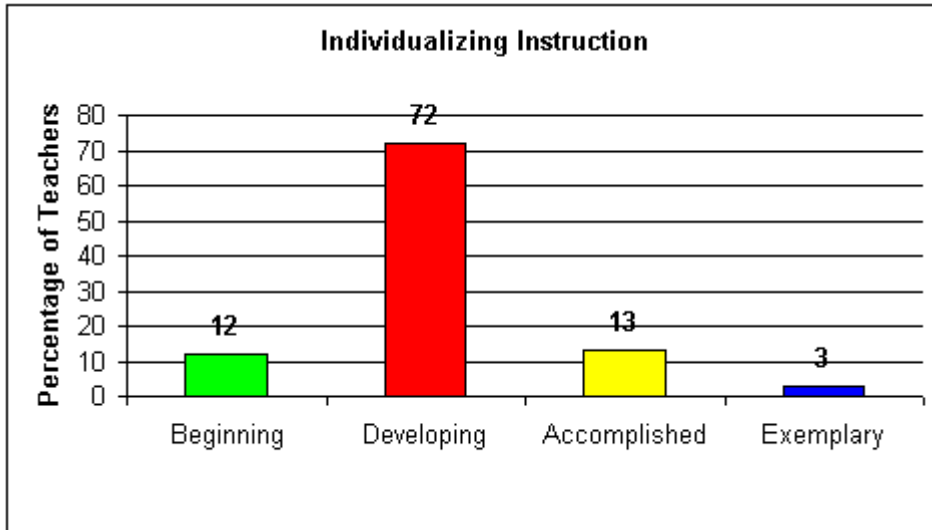
Assessing Student Performance



Fifty-nine percent of teachers place themselves at the Developing level for assessing student performance. These teachers evaluate some student performances or products using subjective as well as objective criteria. They also print copies of electronic work such as word processed documents, graphics and presentations to include in portfolios for student/parent/teacher conferences. At the Accomplished level, 24% of teachers evaluate student projects and performances by using technology-created assessment tools such as checklist, rubrics, and benchmarks that help students assess their own and their peers' performances.

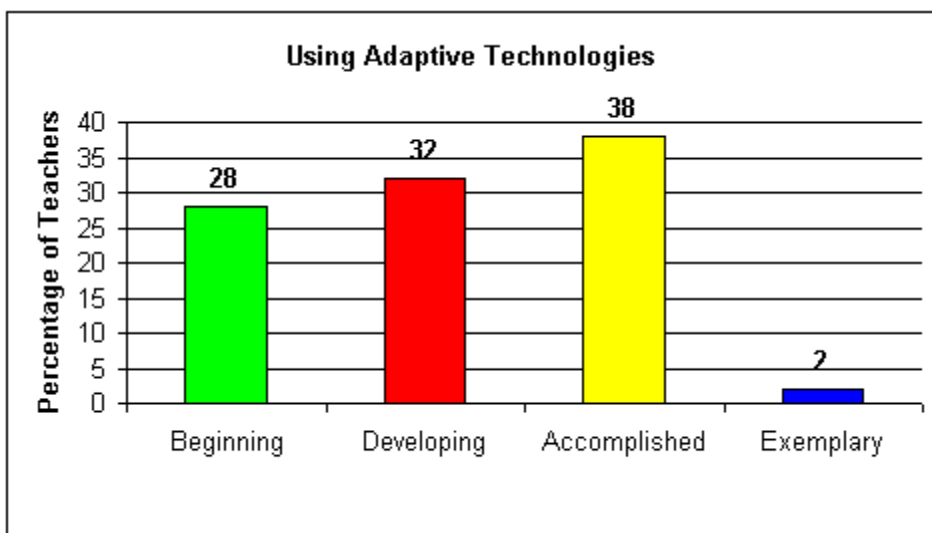
As well, these teachers can objectively determine the quality of student work and have a computerized means of aggregating performance data.

Individualizing Instruction



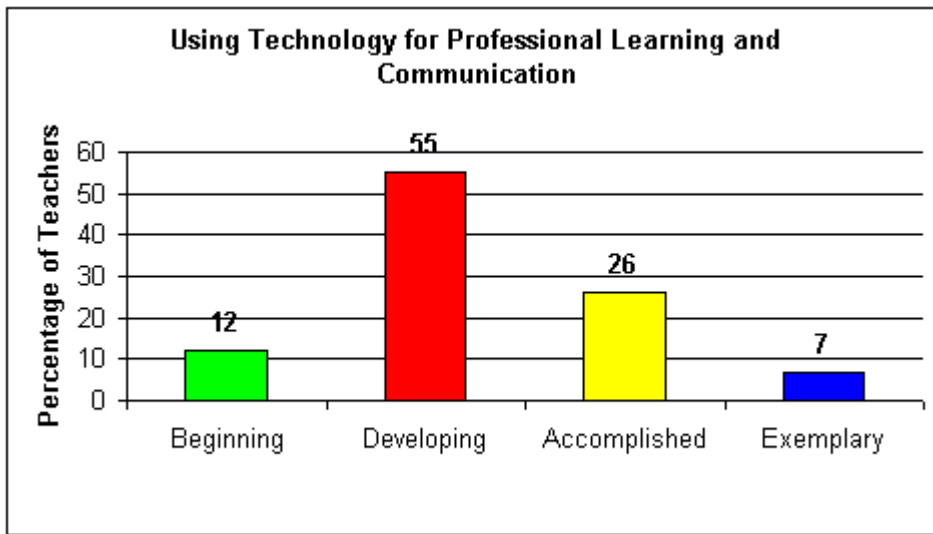
Almost three-quarters of teachers (72%) identify themselves at the Developing level for individualizing instruction. This is the highest rating at the Developing level for any of the pedagogical skills rated. At this level, teachers agree that they occasionally give students a choice of assignments, but that all students in their class (unless in a modified program) must achieve the same learning outcomes within the same time frame. Skill remediation with students using technology is done during or after school. Only 3% of teachers placed themselves at the Exemplary level for individualizing instruction. This suggests that very few teachers have access to computerized planning and reporting tools for individualizing instruction.

Using Adaptive Technologies



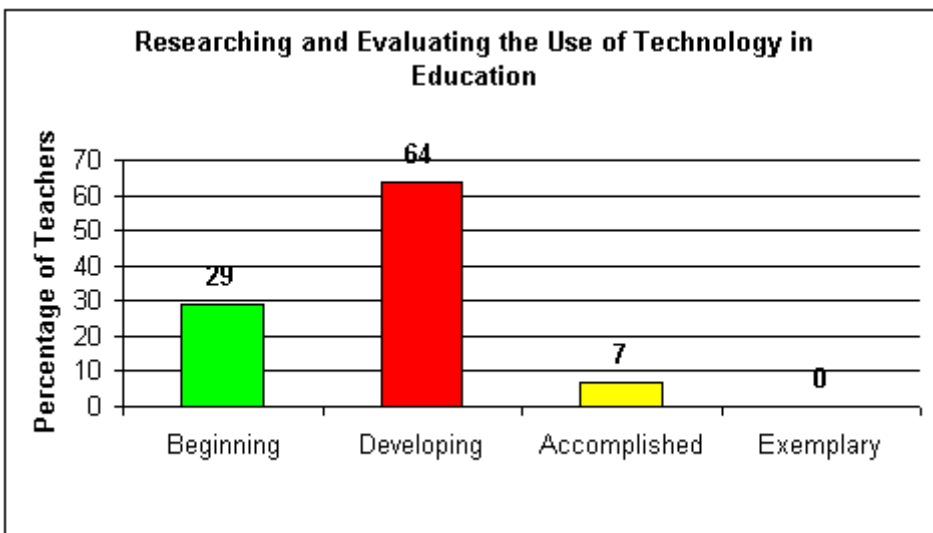
Twenty-eight percent of teachers indicate that they are not aware of how technology can help students with physical or mental challenges (Beginning level). One third of teachers identify themselves at the Developing level for using adaptive technologies and are able to work with students who may bring special devices to work and communicate in the classroom. Many teachers (38%) can also use technology when appropriate to help students with special learning needs (Accomplished level).

Using Technology for Professional Learning and Communication



Over half the teachers (55%) place their skills at using technology for professional learning and communication at the Developing level. These teachers can find lesson plans and educational research online. They also correspond with parents and other teachers using email. One quarter of teachers use the Internet and its online resources to obtain research, teaching materials, and information related to the content of their classes (Accomplished level). However, only 7% of teachers organize professional learning opportunities for other teachers and feel comfortable teaching colleagues how to use technology to enhance instruction. This points to the need to offer increased opportunities for teacher opinion leaders to mentor their colleagues. It also points to the need to offer increased access to online methodologies to maintain the IMYM learning community.

Researching and Evaluating the Use of ICT in Education



Twenty-nine percent of teachers report their skills at the Beginning level for researching and evaluating the use of ICT in education. This is the highest rating at the Beginning level for any of the pedagogical skills rated. These teachers indicate that they have not attempted to determine when the use of ICT has made a difference in their students' learning or in classroom climate nor how to find out if ICT is effective in their classroom. Sixty-four percent of teachers indicated they are collecting, using and sharing with colleagues, anecdotal information and their observations of their students using ICT in the classroom (Developing

level). Very few (7%) teachers are using action research to assess how the technology and methodology they are using affects student learning and classroom climate (Accomplished level).

CONCLUSION:

Integrating ICT into education seems to be a necessary issue for educators / education administrators in the world. However, if teachers cannot make good use of the ICT tools, the money and time spent on the ICT is going to be a waste. Also, if the educational budget is limited, looking for a cost-effective and high-performance ICT tool can be the first priority.

ICT allows flexible, self-paced learning where students are, to an appreciable extent, able to choose what they'd like to focus on and spend variable amounts of time on it based on the perception of their learning needs and positions. This leads to added abilities for self-regulated learning. Reduces stigma of failure. An online environment provides enough privacy and space for learners to not feel miserable about minor failures that come along the way and thus helps keep up the motivation.

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