Use of ICT Based Tool for Education

Sachin N. Pardeshi

Department of Computer Engineering R. C. Patel Institute of Technology, Shirpur, Maharashtra, India

ABSTRACT

Educational technology is now ubiquitous; however, the potential of these technologies is lost without appropriate pedagogical strategies. Teachers must have knowledge of different ICT tools and their use effectively. This paper focuses on different ICT based tools, their use in education.
Keywords: ICT tools, Online Education

I. INTRODUCTION

Information and Communications Technology is an umbrella term that includes technological tools and resources, used to store, create, retrieve, communicate or manage information in any way. For example: personal computers, Spreadsheets, robots, email clients, Word Document, SQL Server, Microsoft Publisher, Adobe Photoshop etc[1].

We are living in a constantly evolving digital world. ICT has an impact on nearly every aspect of our lives - from working to socializing, learning to playing. The digital age has transformed the way young people communicate, network, seek help, access information and learn. We must recognize that young people are now an online population and access is through a variety of means such as computers, TV and mobile phones.

As technology becomes more and more embedded in our culture, we must provide our learners with relevant and contemporary experiences that allow them to successfully engage with technology and prepare them for life after school.
It is widely recognized that learners are motivated and purposefully engaged in the learning process when concepts and skills are underpinned with technology and sound pedagogy [2].

In India quality education became a big challenge. It having number of reason like many colleges complaining they does not get good students, since they are not able to make employable. If we ask students about their problem they say our university syllabus is old. In our college they does not cover syllabus that needed for industry. What is the solution for this? Students having no time, teachers having very limited period, they have to cover their syllabus as well as there is syllabus boundary. These problems motivate us to use different techniques so that students can learn the important topics very easily. Student can attend lecture outside the class. As well as teachers can teach then industry required contents. And it is possible through ICT based techniques.

In this paper will discuss various ICT based techniques for teaching/learning effective strategies with these different tools. The paper will give several opportunities to apply these strategies to design materials and activities for their courses.
This paper has been organized as follows: Section 2 present technique for Elearning Technology, Section 3 discussed Role of ICT in Education, Section 4 ICT based tool for education, and Section 5 ICT based tool and difficulties.

II. METHODS AND MATERIAL

A. E-learning Technology

E-learning makes use of many technologies - some of which have been developed specifically for it, whilst

others conveniently complemented the learning process, for example computer games. Communication technologies are also widely used in e-learning. Starting with the use of email and instant messaging, message forums and social networks, we see a plethora of tools that any internet user would use in any case[3,4].

There are also some technologies that work in a complementary manner to other software and enable new features, for example software that adds a whiteboard on your video conferencing tool to allow you or your peers to make changes on other people's work for review, or screen-sharing which allows someone to make a presentation while still making comments and giving input using the microphone. E-learning makes good use of database and CMS (Content Management System) technologies. These two work hand in hand to store your course content, test results and student records. The data is stored in the database and the CMS provides a user interface for you to add, update and delete data. A good LMS will often provide reporting tools to generate and store progress reports [4].

Elearning tools and technologies used to improve the quality of content are manifold. Software such as Flash and PowerPoint will help you make your presentations slick and interesting, with high quality, graphically rich content. There are word processing packages and HTML editors available these days that make formatting your text or web pages a breeze, removing a lot of the complexity. There are also lots of online services available that you can use to create interactive elements for your courses such as quizzes and games [4,5].

B. The roll of ICT in Education

Information and Communications Technologies (ICT) education is basically our society's efforts to teach its current and emerging citizens valuable knowledge and skills around computing and communications devices, software that operates them, applications that run on them and systems that are built with them.

What are these things? How do they work? How do you use them productively? How are they deployed, assembled, managed and maintained to create productive systems? How they are used in specific business and industry settings? What are the underlying science and technologies behind them and how might those be developed to advance ICT fields? ICT is complex and quickly changing, and it is confusing for many people. It is so pervasive in the modern world that everyone has some understanding of it, but those understandings are often wildly divergent [6].

ICT Roles and Objectives:

1. To implement the principle of life-long learning / education.
2. To increase a variety of educational services and medium / method.
3. To promote equal opportunities to obtain education and information.
4. To develop a system of collecting and disseminating educational information.
5. To promote technology literacy of all citizens, especially for students.
6. To develop distance education with national contents.
7. To promote the culture of learning at school (development of learning skills, expansion of optional education, open source of education, etc.)
8. To support schools in sharing experience and information with others. [7,8]

C. ICT Based Tool for Education

i) Microsoft One note [9]

Schoolwork includes a lot of information, and OneNote helps you, your students, and your teachers capture it all, on all your devices. With it, everyone can stay organized, share lessons, work together, and even spark their creativity. While inspiration can come from anywhere, it should all end up in OneNote.

- **Staying Organized :** Organize your lesson plans and course content in your own digital notebook. Keep everything in a OneNote Class Notebook, and use its powerful search to find what you're looking for, even text in pictures or handwriting. Your notebooks are saved automatically and can be viewed from any devices, online or offline.

- **Delivering Curriculum & Collaborating in Class room :** Gather web content and embed existing lessons in your class notebook to create custom lesson

plans. Include audio and video recordings to create rich interactive lessons for students. Students can use powerful drawing tools to highlight, annotate slides, sketch diagrams, and take handwritten notes. Your class notebook makes it easier to collect homework, quizzes, exams and handouts. Students go to the content library to get their assignments. No more printed handouts for the class.

- **Creating Interactive Lessons:** Provide individualized support by typing or writing directly in each student's private notebook.

The collaboration space encourages students to work together as the teacher provides real-time feedback and coaching. By searching for tags asking for help, teachers can give instant feedback to students who are struggling.

ii) Power Point Plug-in – Mix

Office Mix is a free add-in for PowerPoint 2013. It is a powerful tool that makes authoring and sharing of online lessons / presentations simple. It allows you to make them interactive with quizzes and labs. It allows you to export lessons as mp4 videos. If you know and use PowerPoint today, it should be easy to learn and get going quickly. You can build on top of the large collection of PowerPoint slide decks you might already have to get going.[d]

Mix help students to be interactive while learning outside the class. We can prepare ppt and set the question to understand the concept.

With this addin even we can design a flip class room. Flip class room is a good technique with this every student can attend a lecture with preparation via flip class room and teachers can utilize their time to solve their questions. With this way more topics get covered at the same time there is more involvement rather than same ppt presentation.

It overcome various problem like
- Difficult to author online lessons
- Difficult to make them engaging
- Difficult to publish and share
- Difficult to get relevant analytics
- Back to Outline

iii) Yammer [10]

Yammer is a free enterprise social networking service used for private communication within organizations. Access to a Yammer network is determined by a user's Internet domain so that only individuals with approved email addresses may join their respective networks

- **Create a group**
  Easily create a group in seconds for any team, project, or interest and, with a few clicks, invite members without going through an admin.
  Announcements
  Share an announcement with a group to instantly notify members of important updates. Admins can pin announcements to a group for easy discovery.
- **Discover related groups**
  Add and prioritize groups related to the ones you've already joined so coworkers can discover even more relevant people, content, and conversations.
- **Group search**
  Search within a group to pinpoint conversations and content.
  External groups: coming soon
  Invite customers, partners, and vendors to join your group, so they can quickly access the information they need.
- **Group navigation panel**
  Easily find and switch between the project and team groups that are most relevant to you.
  With the yammer we can create group for department or college and share knowledge, notices etc.

iv) www.sway.com [12]

Office Sway is a presentation web app part of the Microsoft Office family of products. Sway allows users to combine text and media to create a presentable website. Users can pull content locally from the device in use, or from internet sources such as Bing, OneDrive, YouTube, and Facebook.

- **Go from start to finish in minutes**
  Sway makes it quick and easy to create and share polished, interactive reports, presentations, personal stories, and more

Tell your story with interactive content
Bring your Sway to life with interactive content. Include a video to talk about your idea or add an interactive chart to let others dive into the details.

- **See suggested search results based on your content**
Sway suggests searches to help you find relevant images, videos, tweets, and other content that you can drag and drop right in to your creation. No need to juggle apps and web pages to find what you want.

- **Instantly transform your Sway with great designs**
You don't need to worry about formatting, Sway's built-in design engine takes care of it. If the first design isn't right for you, Remix! it to see others or customize it to make it your own.

- **Easily share by sending a link**
It's super easy to share a Sway. Family, friends, classmates, and coworkers can see your creation on the web without signing up or downloading additional software. And you can change privacy settings for more control.

v) Moodle [15]

Although initially designed for higher education environment (university), Moodle has quickly become used across a broad range of organisations worldwide to conduct courses fully online or support face-to-face teaching and learning.

Its modularity, flexibility, security and free availability have attracted learning communities ranging from single primary school classrooms to large universities, businesses, government departments and other places where people learn.

- Primary education - Common uses of Moodle in primary education settings.
- Secondary education - Common uses of Moodle in secondary education settings.
- Tertiary education - Common uses of Moodle in tertiary education settings.
- Adult education and training - Common uses of Moodle in adult education and business/government training. [i]

Why Moodle?

Moodle's an open source platform, so there are no contracts or per-user licensing costs to pay each year The money you save from using an open source platform can be redeployed into your LMS - allowing you to have a more content rich and unique solution MIS integration allows you to integrate Moodle with your management system, saving significant time on admin tasks for your staff Moodle enables you to facilitate more personalized learning, reaching outside the classroom in a more engaging way for staff, students and parents alike [16]

vi) Wiki Spaces [18]

Wikispaces Classroom is a social writing platform for education. We make it incredibly easy to create a classroom workspace where you and your students can communicate and work on writing projects alone or in teams. Rich assessment tools give you the power to measure student contribution and engagement in real-time. Wikispaces Classroom works great on modern browsers, tablets, and phones.

## III. RESULTS AND DISCUSSION

- **Collaborative Writing**

Our visual editor lets you work easily and collaboratively with your students. Use content from anywhere on the web and easily track, provide feedback on, and review student work.
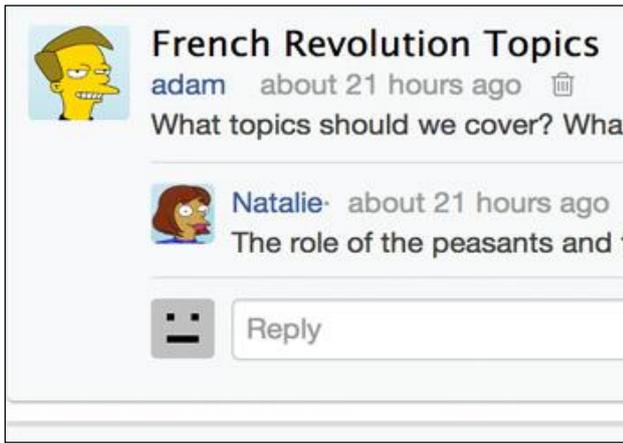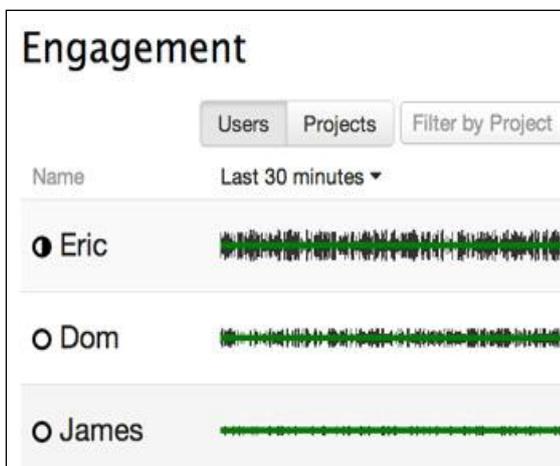
• Social Newsfeed

Easily see everything that's happening in your classroom in one place. Keep student activity safe within the classroom and make it easy and fun to keep up to date.
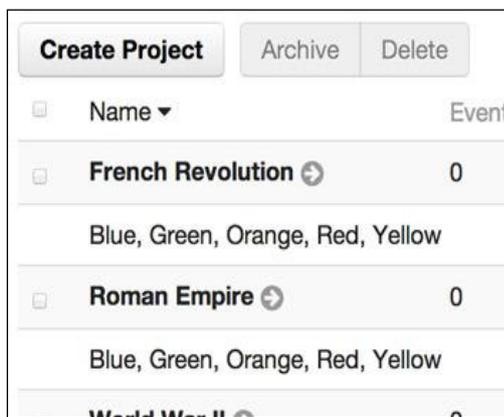
• Organize Your Class

Make it easy for your students to work individually or in groups. Create projects and assign them to students in seconds.[k]

• Monitor Student Progress

See how engaged your students are in real time. As they read and write you can see who is working, and then see how much each student has contributed.[k]

ICT Tool –limitation and difficulties

What is immediately evident is that the use of ICT in schools is not a simple panacea for solving problems of underachievement, nor is it a straightforward way of raising standards of student performance. The investment of ICT resources in schools, and the development of accompanying teacher and student skills, should enhance the overall effectiveness of a school and should also improve levels of academic performance, but there can be no guarantees that these things will happen.

There is a small but potentially important literature on the possibility of ICT having negative effects on teaching and learning - and, in discussing the prospects for combining school improvement work with research on the effects of ICT, it is important to bear these critiques in mind. At the extreme, there have been claims that ICT could 'wreck' schools: the American scientist Seymour Paper once said that putting a computer into a school is 'like putting a jet engine on a stagecoach - you gain a temporary increase in speed, but then the whole thing is wrecked!' (Kenny, Times Educational Supplement, 24 March, 2000).

This is an exaggerated analogy, but there does need to be awareness that there are a number of possible negative aspects to the use of ICT in schools. In particular the student-teacher role has changed and may have become depersonalized. To an extent this relationship has become less direct, less personal and less straightforward because it is now mediated by innovative forms of dissemination and new technology. There are new difficulties of classroom organization and management and the teacher has had to take on an additional role as change agent or manager of change.

Davis and her colleagues make some astute comments about the possible contribution of ICT to the quality of learning:

It would appear that the conditions for classroom learning can be improved by information technology tools. But, equally, teachers can use information technology to create a new set of mundane tasks which negate the opportunities for quality learning(Davis et al., 1997). It is clear that ICT projects cannot simply be 'bolted on', or 'imported' in, to school development or school improvement processes.

An additional difficulty is that of methodology and the fundamental problem of establishing a link between ICT and improved school or student performance. As suggested previously, it is very difficult to establish any kind of causal link between an 'input variable' such as levels of ICT provision, or ICT literacy, and 'outputs' such as performance outcomes, whether these are at the institutional or the individual level. The essential problem here is, of course, one that affects all areas of educational research: the complex and multivariate nature of processes of teaching, learning and assessment. To put this issue another way: it might be possible to show that student performance has improved significantly over a period of time in a school which has overseen the implementation of an ICT initiative, with an appropriate increase in hardware and human resources, but it is likely to be impossible, because there are so many other factors to consider in the school, to prove that a definite link exists between increased ICT use (as cause) and improved performance (as effect).

A final difficulty arises from the fact that these two fields of enquiry have, historically, developed independently and with very little reference to one another. They have developed their own methodologies, terminologies and conceptual frameworks and, whilst there are fairly well established interpersonal networks within each of the fields, these networks have not overlapped or interacted with each other. Some researchers may need to change their approaches. For example, SESI researchers may need to recognise and acknowledge that the scale of ICT usage in schools now means that this should be included in any model or analysis of whole-school effectiveness. Similarly, ICT evaluators may need to develop a more wide-ranging awareness of how the new technologies can contribute to broader processes of school improvement, and also of what other factors are at play in such processes. Appropriate intellectual, organizational and practical frameworks need to be put in place so as to encourage collaborations across these two areas [20].

IV. CONCLUSION

It was generally accepted in all groups that the use of the environment was a vital resource for the teacher and very important as the primary context for learning. Teachers reported that they use the environment to support most areas of the curriculum. ICT makes enable teacher to use such environment by which students get connected with teacher every time even out of over. They are not in the class. Even teacher can check the students performance with the various types of tools. In this paper we have discussed various tools, we can use these tool in our education.

V. REFERENCES

[1] http://fullformdirectory.in/ict-full-form.html. Accessed: 20 Mar. 2016.

[2] http://www.educationscotland.gov.uk/learningandteaching /approaches/ictineducation/roleofictinlearning.asp Accessed: 21 Mar 16.

[3] https://en.wikipedia.org/wiki/Educational_technology, Accessed : 21 Mar. 2016.

[4] http://www.talentlms.com/elearning/technologies-used-in-elearning, Accessed: 21 Mar. 2016

[5] Bottino, R. M. (2003),'ICT, national policies, and impact on schools and teachers' development' 'CRPIT '03: Proceedings of the 3.1 and 3.3 working groups conference on International federation for information processing', Australian Computer Society, Inc., Darlinghurst, Australia, Australia, 3-6.

[6] http://www.mpict.org/ict_education_defined_importance .html, Accessed on: 22 Mar. 2016.

[7] https://verykaka.wordpress.com/2008/07/25/the-role-of-ict-in-education-sector/

[8] Chandra, S. & Patkar, V. (2007), 'ICTS: A catalyst for enriching the learning process and library services in India', The International Information & Library Review Vol. 39, No. (1), Pp; 1-11.

[9] http://onenoteforteachers.com/ z

[10] https://www.microsoft.com/enus/education/products/onenote /default.aspx? Search=true, Accessed: 22 Mar. 2016.

[11] https://products.office.com/en-US/yammer/yammer-features, Accessed : 22 Mar. 2016

[12] https://www.onenote.com/classnotebook, Accessed: 22 Mar. 2016

[13] https://sway.com/x1ATqaNOpMbom7fm, Accessed : 23 Mar. 2016.

[14] Cross, M. & Adam, F. (2007), 'ICT Policies and Strategies in Higher Education in South Africa: National and Institutional Pathways', Higher Education Policy Vol. 20, No.(1), Pp; 73-95.

[15] https://mix.office.com/watch/14iqkll3cdyv, Accessed: 23 Mar. 2016.

[16] Brad Chacos (7 August 2012). "What the Heck Is Yammer?". PC World. IDG Consumer & SMB. Retrieved25 June 2013.

[17] https://docs.moodle.org/20/en/Moodle_in_education#Moodle_in_education_and_training, Accessed: 23 Mar. 2016.

[18] http://www.webanywhere.com/education/products/moodle-lms , Accessed : 24 Mar. 2016.

[19] https://www.wikispaces.com/content/classroom   , Accessed: 24 Mar. 2016.

[20] https://www.wikispaces.com/content/classroom/about, Accessed : 24 Mar. 2016.

[21] Peter Rudd," School Improvement through ICT: Limitations and Possibilities" Paper presented at European Conference on Educational Research (ECER) University of Edinburgh, 22nd September 2000