SUAN SUNANDHA RAJABHAT UNIVERSITY

Week 4

ICT for Educational Management

Assoc.Prof.Dr.Nuntiya Noichun

ICT for Educational Management

Information Communication Technology (ICT) plays an important role in enhancing the quality of education. Administration and management applications of ICT are currently popular in schools due to its capabilities in facilitating administration activities from data storage to knowledge management and decision making.

1. INTRODUCTION

ICT makes dynamic changes in society. It is influencing all aspects of life. The influences are felt more and more at schools. Because ICT provides both students and teachers with more opportunities in adapting learning, teaching and managing the individual needs, society is forcing schools to aptly respond to this innovation.

It provides newer and more effective ways of mitigating some of the challenges being faced by the educational system of the country. These technologies distinguish themselves by their rapid evolution and revolution, continuously changing the modes of engagement with them.

A decade long infusion of computers, and more recently ICT, has demonstrated varying impacts on learning. In the current information age, educational institutions are expected to play a crucial role as the engine for knowledge generation and learning environment. In this regard ICT becomes the vital means to facilitate this task.

ICT has become an essential part of our everyday life, accordingly this integration in school improvement is not only for the purpose of teaching and learning, but also for educational management use, it has become one of the most effective factors in the school improvement.

ICT plays a vital role in improving the functional effectiveness of school system. In this unit we will be discussing about how ICT can help the school administrators improve various administrative tasks of schools.

2. OBJECTIVES

After studying this Unit, you will be able to

- Give an overview of applications of ICT for school administration and management
- Describe the role of ICT in school record keeping and its maintenance
- Use various technologies for record keeping and scheduling
- Use technology effectively for communicating with parents
- Explain the role and functions of school management systems

- List the different types of assistive technology
- Explain the role of assistive technology in inclusive education
- Explore the application of UDL approach in classroom
- Use variety of digital assistive technologies in the classroom
- Explain how to plan, manage and implement appropriate ICT infrastructure
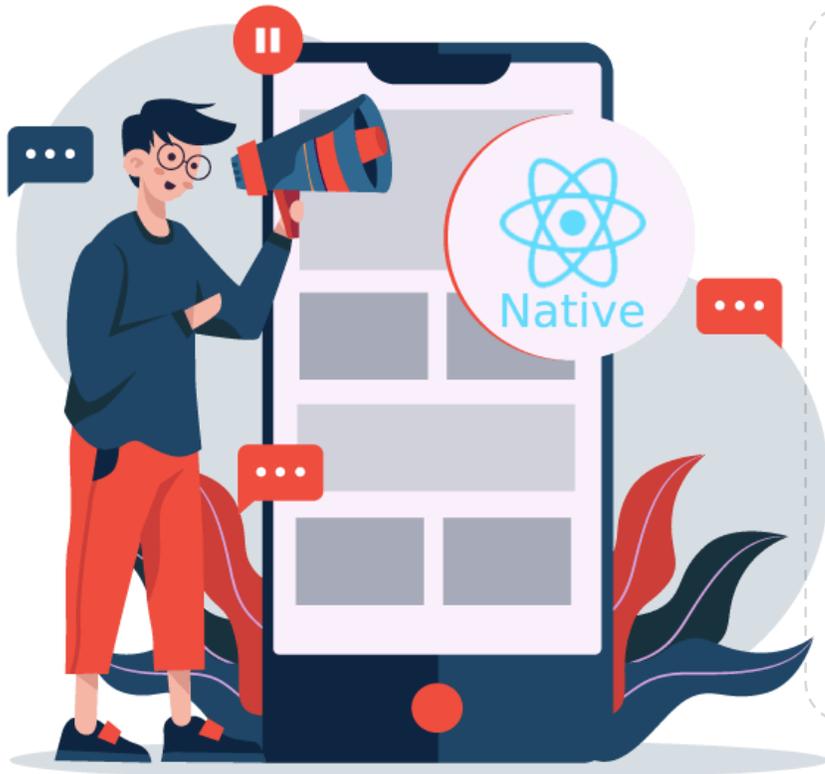- Develop a technology plan for a school

Change has been happening at an uneven pace in any growth-oriented industry, and the education sector is no exception. Rapid growth in the field of education has made governance in academic sector a very complex task.

The 21st century has witnessed tremendous advancements in technology which has led to far-reaching developments in the administrative system. Cost-effective technology combined with the flexibility in learning and administrative activities is essential to enhance efficiency.

Information and Communication Technology (ICT) plays a vital role in supporting powerful, efficient management and administration in education sector. It is specified that technology can be used right from student administration to various resource administration in an education institution.

Table-1: The administrative information.

Sl. No.	Construct	Content categories
1	Student Administration	Usage of electronic media by students to apply for admissions
		Usage of computers for student registration / enrolment
		Availability of timetable / class schedule in electronic form
		Usage of computers for maintenance of attendance of students
		Communication of academic details of students to their parents / guardians through e-media
		Usage of e-media for notifications regarding hostel accommodation
		Usage of e-media for notifications regarding transportation
		sage of electronic media by students to apply for admissions

Sl. No.	Construct	Content categories
2	**Staff Administration**	Usage of computers for recruitment and work allotment of staff in the institution
		Automation of attendance and leave management of staff members in the institution
		Usage of electronic media for performance appraisal
		Communication with staff using e-media
		e-circulars from the institution regarding official matters
		e-kiosks are available in the institution

Sl. No.	Construct	Content categories
3	General Administration	Usage of e-media for scheduling / allocation of halls for examinations
		Dissemination of information in the institution through e-kiosks
		Usage of e-media by students to apply for university examinations
		Usage of e-media for the processing and display of results of students
		Facility for students to make fee payments electronically

3.1 Record Keeping

School records are books, documents, files and CD ROM in which is embodied information on what goes on in school (e.g. scholastic, co-scholastic, non-scholastic activities and important events etc), the school plant as well as other relevant information focusing on the growth and development of the school.

The school records are official transcripts or copies of proceedings of actions, events, other matters kept by the school administrator, school records could be viewed as authentic registers or instruments or documents of official accounts of transaction or occurrence which are preserved in the school's office. Therefore, every school must keep certain specified records.

Importance of school records : School records keeping includes the fact that school records tell the history of the school and are useful historical sources.

1. Tell the history of the school and are useful historical sources.

2. Facilitate continuity in the administration and management of a school.

3. Facilitate and enhance the provision of effective guidance and counselling services for students in the social, academic career domains.

4. Provide information needed on ex-students by higher and other related institutions and employers of labour for admission or placement.

5. Facilitate the supply of information to parents and guardians for the effective monitoring of the progress of their children/wards in schooling or performance.

6. Provide data needed for planning and decision making by school heads, ministries of education and related educational authorities.

7. Provide a basis for the objective assessment of the state of teaching and learning in a school, including staff and student performance by supervisors and inspectors.

8. Provide information for the school community, the general public employers as well as educational and social science researchers for the advancement of knowledge.
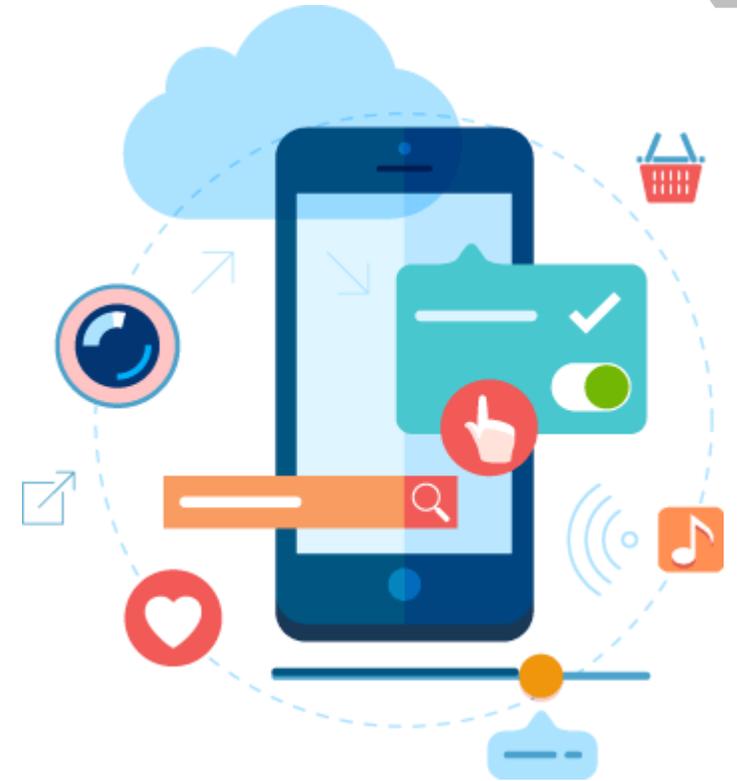
9. Enable school heads to collate information on pupils and staff for decision making by higher authorities, the law courts security agencies and other related government agencies when occasion demands.

10. Provide a mechanism such as the school timetable for the productive management of time and coordination of school work and activities.

11. Serve as data bank on which both the school head and staff and even students can draw on.

Some Important School Records

Admission and Withdrawal Register : This is a permanent record book into which is entered information regarding the entry and exit, including the details of the education and progress of each pupil that ever passes through the school.

Attendance Register: An attendance register is a book in which the presence or absence of students in a school is recorded on a daily basis. It is a statutory record that must be kept by every school. This record is kept on individual class basis. The class teacher is the custodian of this record.

Log Book : The log book is a historical record of events that have significant effects on the schools' activities.

The Visitors Book : The book is meant for recording the visits of important personalities, including officials and from the ministries of education or other related government agencies or any other school related visitors.

Staff and Students' Personal Files: It is necessary that the school should have as much information on every teacher and student as possible without violating their privacy.
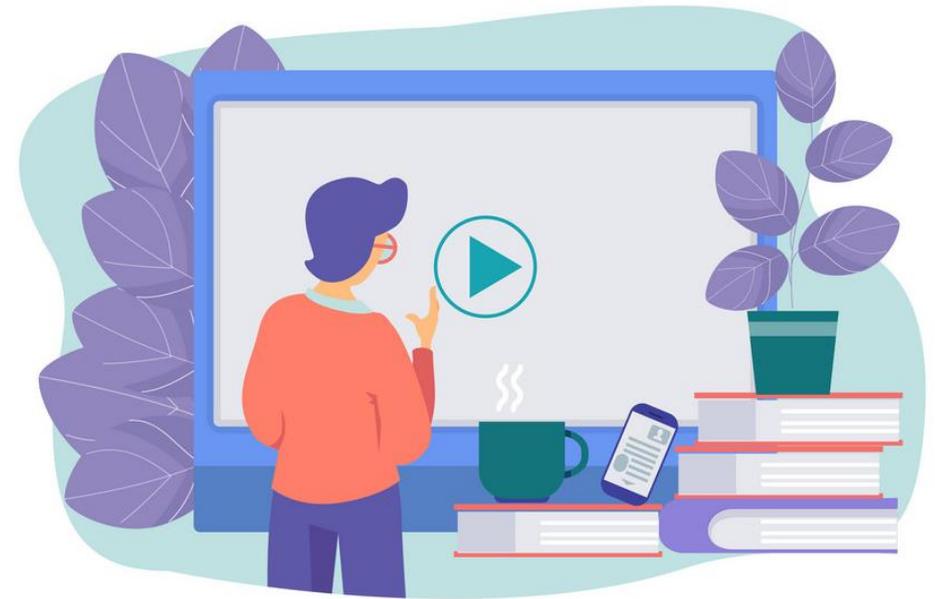
Cumulative Record Folder: Students' cumulative record folder is a storehouse of information on students' cognitive, affective and psycho-motor development

Students' Report Sheet/Card

1. It keeps data on students' academic performance in termly basis.
2. It assists in monitoring students' academic progress.
3. It is a compliment to cumulative record folders.

1. It gives information on what a teacher plans to teach the students at a period of time.

2. It clearly shows the teachers' level of preparedness and their level of competence.

3. It challenges teachers for the task ahead.

Scheme and Record of Work Book : It reflects estimate of academic work which teachers expect to accomplish in each subject based on number of lessons they will have during each term. Pertinently it shows the ability of the teacher to organize the year's work and his/her resourcefulness and enthusiasm regarding the progress of the pupils.

Staff Time Book and Movement Book

1. They provide information on when staff report and or close at work.
2. They promote regular attendance and punctuality
3. They help checking truancy and gross indiscipline in staff.

Transfer and Leaving Certificate : Transfer and leaving certificate is the formal exit of the student after completion of study or leaving during the course of study in a school.

Library records : The library will have many records like stock register, issue register etc. Many of the routine function of the library can be automated using library management software.

Stock register : it is the record of all equipment and materials available in the school including the laboratories

Cash Register

1. It is a record of financial transactions in schools.

2. It gives information about income and expenditures.

3. It promotes accountability and prevents corrupt practices.

Potential of ICT in Record Keeping

The usefulness of keeping school records with Information and Communication Technologies (ICT) is for the following reasons :

Administrative Efficiency : One major setback in achieving the educational objective of the secondary education is inefficiency of the principal in keeping some records. With the introduction of information and communication technologies such as computers, digital libraries, e-mail, internet and so on where information are stored and disseminated, principals can do better in keeping records, and become effective and efficient in performing their prescribed roles as administrators.

Availability of Information : Information and Communication Technologies will help maintain adequate and accurate records in our schools and make it available with ease.

Easy Retrieval : It also leads to easy accessibility and dissemination of information on school records, will become available for national planning, financial budgeting, effective implementation of the educational programs and policies.

School record keeping is all about information collection, storage, retrieval, use, transmission, manipulation and dissemination for the purpose of enriching communication, decision-making and problem solving ability in the school system.

It is therefore necessary that this process be as accurate and accessible as possible. Using ICT in keeping school records will help to facilitate and enhance the administration of the school towards achieving the goals of the secondary education.
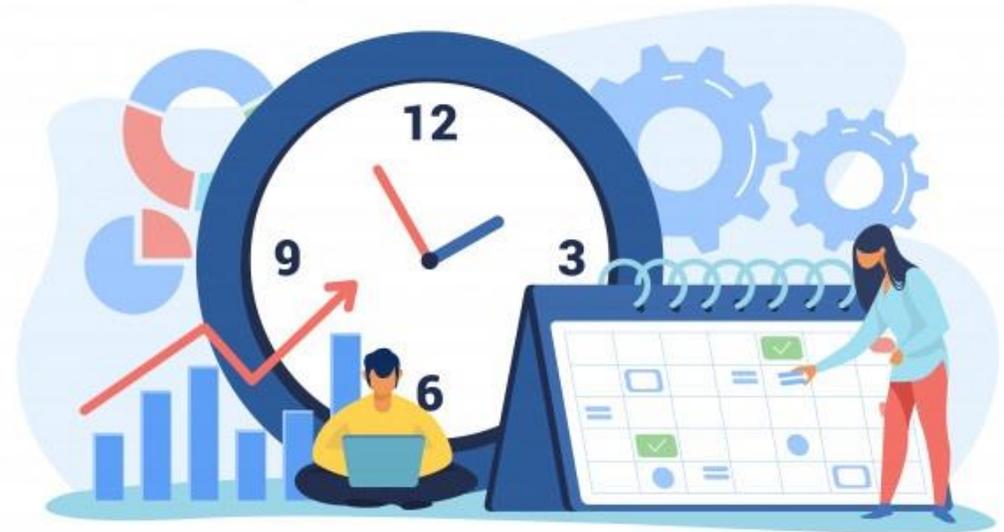
3.2 Scheduling

Creating a schedule that will maximize instructional time, provide time to meet the needs of the school's students, provide time for staff to meet and plan, organize various curricular and co-curricular activities of the school is very important for any school. Use of ICT helps to ensure that such scheduling happens smoothly.

Some of the important activities of the school that need to be planned and scheduled are

- School calendar
- Teaching time table
- Examination time table
- Meetings including PTA

There are many software tools which help in such scheduling. Google calendar and FET time table software are two such commonly used tools.

Google Calendar:

Google Calendar is an internet-based time and task-management online application that allows for access to calendars via web browsers. Calendars can be created by schools and shared with parents, teachers, and students. Reminders of scheduled activities can be sent via email, text message, or pop-up messages within a web browser. Users are allowed to create as many calendars as they choose. One can have day, week, month, and year view of the calendar.

Google calendars can be used by individuals like students, teachers, and principals in scheduling their personal time. Apart from this schools can use Google Calendar to manage time, coordinate projects, and share events with others. Academic departments, student clubs, and study groups can create and share Google Calendars.

Teachers can provide current information on meeting times, deadlines and office hours with students, as well as post document or presentation files to their calendars. These features can ease the management of students by providing timely information and reminders.

Dissemination of readings or homework can be accomplished via the attached files. For learners, Google Calendar offers a way to view up to date class information and helps in collaborating with others.

Some more uses of it are given below :

1. It provides information on when classes begin, when school opens and closes
2. It shows activities to be performed by the teachers and students.
3. It assists in regulating the activities of students and staff of a particular school.
4. It facilitates and enhances student interest and attention and prevents mental and physical strain.
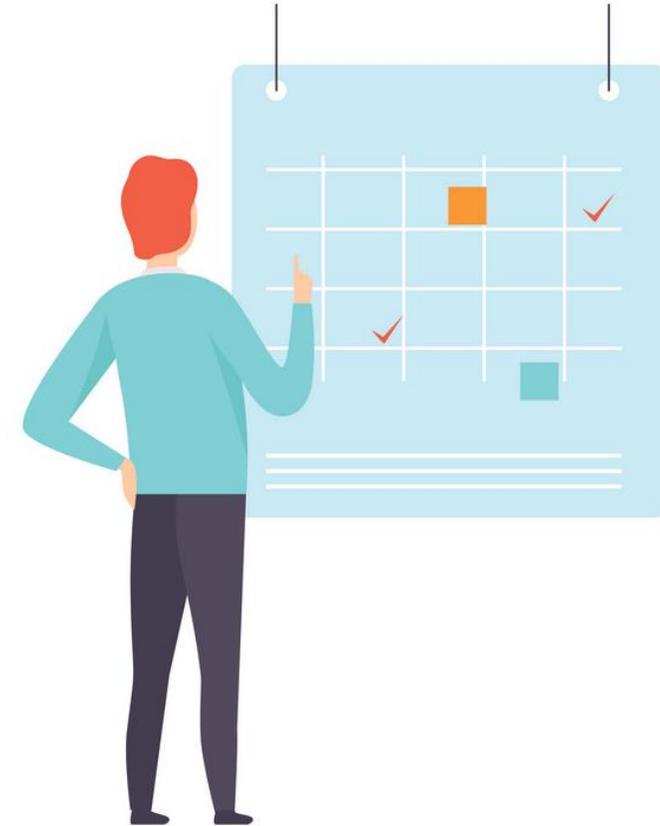
The following are some time table generating software.

1. FET : Free Evolutionary Timetabling for Linux platform can be downloaded from ubuntu software centre.

2. AutomaticTimeTable.com : Asc timetable is a fully automatic school time table scheduling software. http://www.automatictimetable.com/

3. aSctimetables.com which comes under proprietary soft ware whose trail version for windows and Mac is free now

FET:

FET is free software for automatically scheduling the timetable of a school, high-school or university. It uses a fast and efficient timetabling algorithm. It is free software, open source, licensed under GNU/AGPL 3. The term FET is the abbreviation of Free Evolutionary Timetabling at the beginning stage, as it is no longer evolutionary, the E in the middle can stand for anything the user prefers.
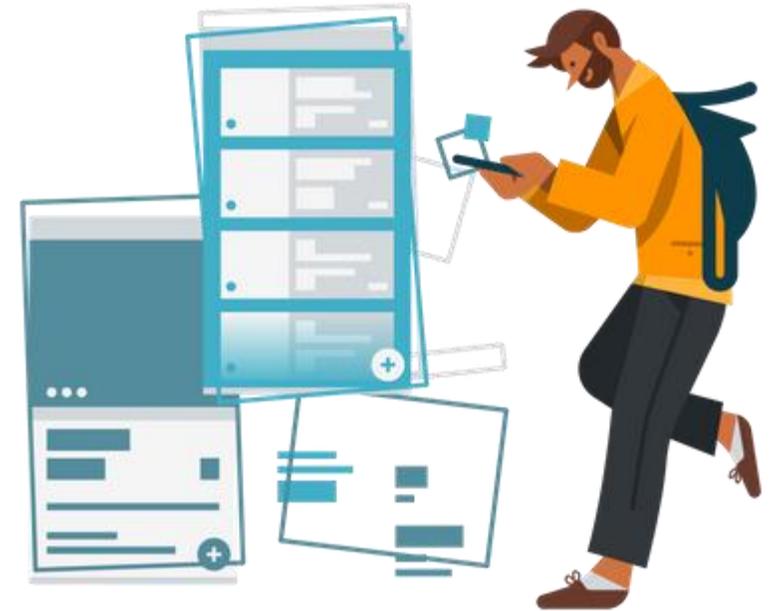
It is based on C++. Liviu Lalescu of Romania developed this timetable generator in 2003. By 2007 it become user friendly and fast. Since FET has a very large palette, it can care data of all groups (classes / courses / students).

Working with FET:

FET can be downloaded from Ubuntu software center as timetable generator. First task to generate a time table using this software is to input data. The data contain the Basic settings, Activities and Constraints.

Basic setting :

Once you open time table generator a pop up window like the one below (left) will open. For a new file we have to enter data using the following steps. Once you select data in the above mentioned window we will get the pop-up window as shown below (right)

Basic contains institution name & comments which are optional data. Comments will be printed at the beginning of the timetables (before table of content). Use the comment to write about problems, latest added constraint, missing constraint "Free Evolutionary Timetabling"; as it is no longer evolutionary, the E in the middle can stand for anything the user prefers or constraints that should be modified.
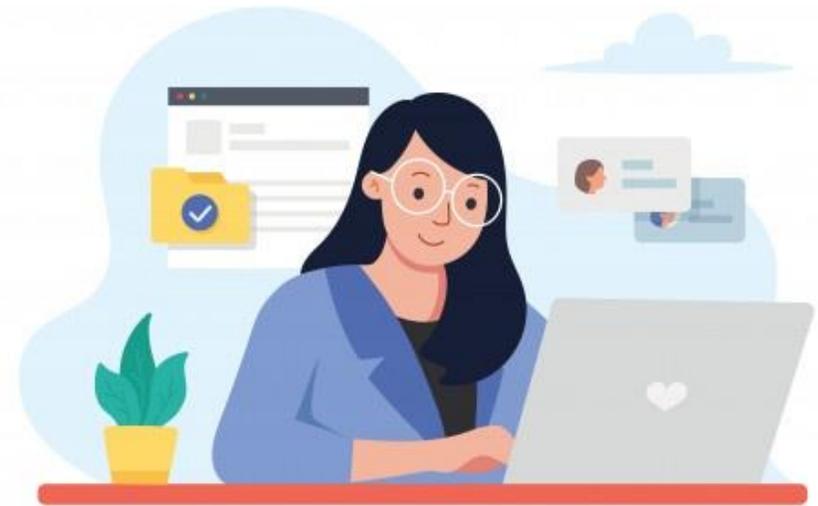
Teachers, subjects, activity tags & rooms: Add teachers, subject, activity tags, rooms and buildings, by selecting corresponding fields. Things to be taken care while entering years, groups and subgroups:

3.3 Communicating with Parents

Communication is important to inform parents about school activities. It is also a vehicle for developing awareness and understanding among parents of their role in the learning and development of their children. It is also an opportunity to learn about the children in your classrooms.

Communication between schools and families is essential for building trusting relationships that foster parental involvement. Parental involvement in schools and social institutes is necessary for youngsters to develop successfully and to make decisions that will have positive outcomes for their future.

The role of new ICTs in improving parental involvement in schools and social institutes and uncovers barriers that prevent usage of technology to promote communication. As society becomes increasingly dependent on technology, schools are investing more time and money in technological means of communication.

Access to computer and Internet technologies is increasing all over world in work places and schools. Both educators and parents are provided with access to electronic communication. It is well established that building home-school partnerships is a powerful avenue for increasing the satisfaction of parents and the community with schooling and for improving schools.

Parents' involvement in their child's education is a key factor in the child's scholastic success. Parental participation ranges from paying little or no attention to too much attention. As the teacher, he/she must help manage the parental participation so that students are accountable for their own learning.

Areas of Communication

Parental involvement encompasses direct contact with teachers, parental actions at school, and parental actions at home. Following are the different kind of communications and involvement expected of parents:

Basic obligations of parents, includes the obligation of parents and families to provide safe, healthy home environments. The school can aid parents by providing workshops, presentations, and general information about health and safety issues. Schools are also expected to provide parents the information needed to assist their children with homework and other assignments.

The schools are expected to communicate regularly with parents and keep them informed about school programs and their children's progress in school.

Parents are expected to participate in school activities and provide ample volunteer services for the betterment of the school. Giving parents the information they need about opportunities to volunteer is one way to increase family involvement.

The parents involvement in decision making, means giving parents the tools they need to become active members in the governance of the school.
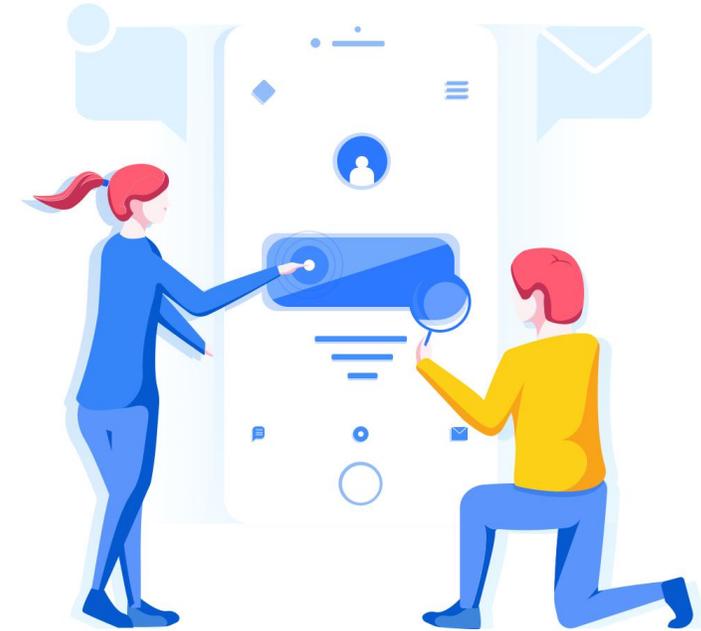
ICT can play a vital role in communicating and collaborating with parents and the community. Some of the tools and technologies which help in this process are outlined below.