

# **ICT IN EDUCATION**

**CLUSTER UNIVERSITY OF JAMMU**  
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## **USE OF SEARCH ENGINES FOR THE RESEARCH PROBLEMS**

The Internet is often the first place many people go when they need to do research. Though this might be the first place to look for basic information, the key to using the Internet wisely begins with understanding how the Internet works and how it can work for you.

### **How Internet Search Engines Work**

An Internet search engine is akin to a library in the online setting. Within millions of domain names are stored pieces of information you can use for your research.

**Browser:** The browser is the entryway to your Internet searches. You can use a variety of different search engines to help you begin your research, including:

- Google
- MSN's Bing
- Ask
- Yahoo!
- Dogpile
- Altavista
- AOL search

No matter what search engine you decide to use, you will find a vast collection of resources. Many people choose one search engine before all others, and you might choose to do the same.

In collecting your information, assess how quickly the search engine can get to your needed materials and then choose the search engine that works consistently for you. It is much easier to use one search engine than to use several.

While search engines are complex in the way they arrange their information, this is the basic setup.

- **Domain name:** At the base, each Web site online has its own personal URL. This is the name of the Web site. For example, you might have [www.Apple.com](http://www.Apple.com). This is Apple's Web site name. If you were to type this name into a browser or search engine, you would find a listing for the Apple site. If you typed in another spelling into a Web browser, you would not reach this site.
- **Domain details:** After the domain name, you might see additional words, often after a back slash (/). This allows the site to break up into additional pages so a person can reach different pieces of information.
- **Subpages:** Within those pages might be even more subpages, helping you further refine your search and find the results that you need to complete your research.
- **Keywords:** Search engines operate much like a computer at a library might. You can type in a word that is related to your topic, a title of a book, an author, a question, or any other number of words to find results that are related to your search. Search engines rank the sites online by the keywords that are most related to the Web sites, as well as to keywords that are used most often on those sites. For example, when you want to look something up about dieting, you do not type in "carrot." You type in "diet" or "dieting." Search engines have complicated algorithms to determine what keywords match best to Web sites online.

- **Popularity:** What you might not realize is that search engines also will rank Web sites based on how popular they are with users. For example, when you look up weight loss, you might find a site that talks about the health-related aspects of weight loss, rather than an actual weight loss plan. Why is this? More people decided to choose that Web site over weight loss product Web sites, so the search engine ranks it higher. These popularity rankings might change between search engines or they might change over the course of a week, depending on the popularity of a Web site.

Now that you know how a search engine basically operates, you can begin to see how you need to work with the search engine to find the pages and Web sites you need for your individual research. Though you might have a clear idea in mind of the questions you need to answer, you need to work with the search engine to ensure you can find the best possible information.

The Internet has a lot of information, and a main part of your research process will be sifting through your findings to determine what is useful.

### **Search Engine Strategies of Research Problems**

When you first use a search engine to look up the answer to a question or to begin a research project, you will notice something: Some of the results you receive are relevant and some are not. This happens because search engines all have different rules about how the search engine results will be listed. To maximize the efficiency of your search engine search, you need to use strategies that help you find the most relevant results first. This will reduce your research time and ensure the sites in the list will help you with your project.

- **One-word search:** The simplest way to use a search engine is to type in one word that is crucial to your search. This might be a word that is in your research title or a certain item you need to know more about to be prepared for a presentation.
- **One-phrase search:** If you have a phrase that is often attributed to your main topic, then you can use this in search engines.
- **Multiple term search:** When you want to make your search as specific as possible, you might want to type in as many keywords as possible to make sure you are narrowing the results. For example, instead of "diet," you might type in "diet healthy vegetarian."
- **Quotation marks:** If you want the search engine to search for something that is spelled the same way that you typed it in, surround the word with quotation marks. This tells the search engine that you want only results that match the spelling exactly.
- **"AND":** One of the Boolean operators is "AND," which is a way to tell the search engine that you want to include multiple words in the search engine results. For example, if you want to talk about salt and pepper, then you might type in "salt AND pepper." This will lead to results that include both of the keywords.
- **"NOT":** If you have a term you need to research, but you do not want another term associated with it, then you would use another Boolean operator. For example, you want to research "pepper NOT salt." This will exclude any results that include salt.
- **"OR":** The last used Boolean operator is "OR." If you are not sure what you need to include, but you need to include both terms, you might put "salt OR pepper." Your results might include one or the other or both keywords.

- **Use common terms:** If you need to do some research on sweatshirts, it might be better to use the word "sweatshirt" instead of "hoodie." Think about the most basic term associated with the idea you need to research.
- **Synonyms:** You also may want to choose to use synonyms of the topic you need to research if you cannot find the original word online. You can turn to your thesaurus for help with finding synonyms.
- **Related terms:** You may also want to create a list of related words that can help you begin to find more research results. When talking about an engagement, for example, you might include "diamond ring" in your search list, too.
- **List the most significant word first:** When you have a list of words you will use in your search engine, type in the most important word first. This will ensure the search engine focuses on the most important term.
- **Asterisks:** When you are not quite sure how to spell a word or you are missing a part of a phrase, you can use an asterisk to tell the search engine you need help. For example, if you are not sure what Shakespeare's important quote in Hamlet was, you might type "to be \* to be." This would return results that answer your question.
- **Question marks:** If you are not sure about your keywords or a part of the phrase you are typing into the search engine, then use a question mark.
- **Plus (+) sign:** You can also use this to link together the keywords you want used as a part of the search process. For example, you might use "peanut+butter+jelly."

## Potential Problems with Internet Research

While more people use the Internet than ever before for their research, this is not without its troubles. The Internet contains valuable information, but it also contains information that has not been well-researched.

Another set of problems occurs when a person uses the Internet for all research.

Here are some ideas to consider:

- **Choose respected sites.** It is best to choose Web sites that have been used for years and that are run by a team of experts. At the very least, the Web site should have some sort of expertise or have a board of editors that helps ensure that information on the site is accurate.
- **Consider the objectivity of the Web site.** When you read a Web site about the benefits of beef, look to see who is sponsoring the site. If a beef company is sponsoring the site, you might want to look at the information more carefully. While a site may not be lying about the information it posts, the site might be influenced by its sponsors.
- **Realize that some publications cannot be posted online.** There are some journals and articles that might not be able to be posted online due to copyright issues. Some articles can only be found in print at libraries.
- **Notice that some publications are limited online.** Many publications are limiting the content they have online. When this is the case, you might only be able to find a portion of the content you need.

- **Some research can only be obtained online via memberships.** Some journals and magazines online will post all of their latest issue's contents, but a person will need to subscribe to be a member to access the information.

## **IDENTIFYING THE LEGAL AND ETHICAL ASPECTS OF USING INFORMATION ON WEB.**

Ethics are a set of moral principles that governs an individual or a group on what is acceptable behaviour while using a computer. Computer ethics are set of moral principles that govern the usage of computers. One of the common ethic missed by many among computer ethics is violation of copyright issues.

Duplicating the copyrighted content without the author's approval, accessing personal information of others are some of the examples that violate ethical principles.

### **What is the UnEthical behaviour of students/teachers?**

#### **Digital plagiarism:**

Plagiarism is one of the major forms of academic dishonesty which has always existed in education, including higher education. For example, assignments submitted by students may turn out to be copied from fellow students or could be taken over, in part or in whole, from existing published works. The use of computers and Internet added to the means that students have at their disposal to commit plagiarism. However, they make it much easier to do and much harder to detect.

#### **Breaking copyright and software theft :**

Throughout the society, it is well known that the illegal copying of copyrighted media (texts, music works, movies and software programs) is widespread. Moreover, many people who engage in such activity do not consider themselves to be doing something that is immoral. This is certainly true for college students. And this attitude of students seems to match developments in the current information age, in which the Internet increasingly functions as the most important information medium that people use.

#### **Improper use of computer resources:**

Students and staff may have authorized access to computer resources, but then go on to use these resources improperly. They may have a school/library Internet account, or they may use computer system or computer network or computer software that is owned by the school, or they may use computerized services offered by the school, and do so in a way that does not meet the school's standards for proper use of that particular resource.

For example, students may use their student account to run their own Internet business, may open up a popular website or service that generates much traffic,

downloads MP3 files, staff members may use the school's server or computer systems to download or view or store content that is either illegal or against the school policies (e.g., racist or fascist materials or pornography) or members of the academic community may spread computer viruses or worms.

### **Securing information privacy and confidentiality:**

#### **Personal information on public computers:**

While using publicly accessible computers, students or staff may unknowingly leave personal information on the public computers, such as cached web pages (accessed web pages that are left in temporary storage on the disk drive and may remain there even after a browser is closed) and cookies (small files that are put on a hard disk by a web site to identify users and their preferences), that are then available for inspection by others.

#### **File sharing:**

The computers that are used by Student or faculty may contain software that allow files from computer accessible to other users on the campus network and outside without knowledge of the owner, or they may allow files to be stored on a central server that are then accessible to others without their permission. This could allow strangers to read these files that may contain personal information.

#### **School web pages and bulletin boards:**

Web pages maintained by the school, by faculty or by students may contain personal information that may access the privacy of others. Likewise, postings and re-postings (forwarded messages) on bulletin boards or in other electronic forums may contain personal information of third parties for which no authorization has been given.

#### **The ten rules of computer ethics:**

- One shall not use a computer to harm other people.
- One shall not interfere with other's computer work.
- One shall not snoop around in other 's computer files.
- One shall not use a computer to steal.
- One shall not use a computer to bear false witness.
- One shall not copy or use proprietary software for which one have not paid.
- One shall not use other's computer resources without authorization or proper compensation.
- One shall not appropriate other's intellectual output.
- One shall think about the social consequences of the program written or of the system designed by one.
- One shall always use a computer in ways that insure consideration and respect for one's fellow humans.

#### **Ethical rules for the computer users :**

Some of the rules that the individuals should follow while using a computer are listed below:

- Do not use computers to harm other users.
- Do not use computers to steal other's information.
- Do not access files without the permission of the owner.
- Do not copy copyrighted software without the author's permission.
- Always respect copyright laws and policies.
- Respect the privacy of others, just as you expect the same from others.
- Do not use other user's computer resources without their permission.
- Use Internet ethically.
- Complain about illegal communication and activities, if found, to Internet service Providers and local law enforcement authorities.
- Users are responsible for safeguarding their User Id and Passwords. They should not write them on paper or anywhere else for remembrance.
- Users should not intentionally use the computers to retrieve or modify the information of others, which may include password information, files, etc.

### **Internet Ethics :**

Internet ethics means an acceptable behaviour for using internet. We should be honest, respect the rights and property of others on the internet.

### **Acceptance**

World Wide Web is not a waste wild web. It's place where values are considered in a broadest sense. We must take care while shaping content and services and we should recognize that internet is not apart from universal society but it is a primary component of it.

### **Sensitivity to National and Local cultures**

It belongs to all and there is no barrier of national and local cultures. It cannot be subject to one set of values like local TV channel, a local newspaper and we have to accommodate multiplicity of usage.

### **While using e-Mail and chatting**

Internet must be used for communication with family and friends. We should not use the internet chatting for communicating with strangers and should not forward the e-mails from strangers. And we must teach children on risks involved by chatting or forwarding e-mails to strangers.

### **Pretending someone else**

We must not use the internet to pretend as someone else and fool others. We must teach children that fooling others and hiding your own identity is a crime.

### **Avoid Bad language**

We must not use rude or bad language while using e-Mail, chatting, blogging and social networking, we need to respect their views and should not criticize anyone on the internet and the same should be taught to children.

## **Hide personal information**

We should teach children not to give personal details like home address, phone numbers, interests, passwords to anyone. No photographs should be sent to strangers and they should be taught to hide personal details from strangers because it might be misused and shared with others without their knowledge.

## **While Downloading**

Internet is used to learn about music, video and games by listening to it, and learning how to play games. We must not use it for downloading them or share the copyrighted material. The same should be taught to children, and they must be aware about the importance of copyrights and issues of copyright.

## **Supervision**

You should know what children are doing on the internet and the sites they visit on the internet and should check with whom they are communicating. Look-over their shoulder and restrict them browsing inappropriate sites. Parental involvement while a child is using the internet and helps the child to follow computer ethics.

## **Encourage children to use Internet**

We must encourage children, students and others to gain the knowledge from the internet and use it wisely. Internet is a great tool where one can gather information which can be used for learning.

## **Safety measures for Ethics**

There are four effective approaches who want to ensure they are doing the right thing online:

- Have a basic understanding of the technology
- Participate with your child online.
- Determine what standards have been established for in-school computer use.
- Create a set of rules; along with your child, relating to both ethics and safety.

As per the importance of information technology, and given the possibilities of unethical use of this technology by students and faculty, schools/colleges should ensure that they have policies regarding the use and management of information technology by students and staff.

Several ethical codes dealing with technology use exist and many schools have adopted "Acceptable Use Policies" that include rules for the proper use of information technologies. Teachers, students, and parents need to know and understand these ethical codes.

For children, the major issues surrounding technology ethics can be categorized into three areas: privacy, property, and appropriate use. School related cases can be found in each of these areas.

Teachers need to develop learning objectives and activities that specifically address technology ethics. Proper use needs to be taught at the same time that other computer skills are taught. Students understanding of ethical concepts need to be assessed. Technology use privileges, especially those involving on-line use, should not be given to students until the assessments show that a student knows and can apply ethical standards and school policies.

In schools, one should have an Acceptable User Policy. An "Acceptable Use Policy" that describes the use of the Internet and other information technologies and networks in a school. The rules in these policies often apply to both staff and students. Everyone in the school, as well as parents, needs to know and understand these policies.

### **An Acceptable User Policy may contain**

- Not using the service as part of violating any law.
- Not attempting to break the security of any computer network or user.
- Not posting commercial messages to school groups without prior permission.
- Not attempting to send junk e-mail or spam to anyone who doesn't want to receive it
- Not attempting to mail bomb a site with mass amounts of e-mail in order to flood their server.
- Do not use computer technology to cause interference in other users' work.
- Do not use computer technology to steal information.

## **RESTRICTING THE UNDESIRABLE INFORMATION ON THE WEB.**

The Internet and World Wide Web are a fantastic resource for finding and sharing information. The Web contains literally billions of web pages containing information about every topic imaginable.

However we need to take care when using the Internet to look for information, or to send information. The Internet and Web are not regulated - there is no organisation that controls who can create web pages or what those pages can contain. Anyone can create web pages and say anything they want to.

In many ways this is a good thing. It means that corrupt organisations or governments, who have always been able to hide details of their activities, are no longer able to do so. When bad things happen, people write about it on the Web and the world gets to know, and hopefully do something about it.

But it's also a bad thing. It means that people or organisations can easily spread lies and hatred. There are thousands of websites containing bigoted viewpoints, and thousands more that are full of information that is biased, inaccurate, or just plain wrong.

### **Undesirable Information**

In addition to the Web being full of websites with inaccurate information, there are also a huge number of websites that contain highly offensive, or illegal material.

Avoiding this type of material can be tricky. Many organisations such as schools, some governments (e.g.

for religious reasons), and also many parents, make use of web page filtering software. This software attempts to prevent offensive and illegal material being accessed.

Even if filtering software is not installed on a computer, you can still take steps to help you avoid these types of sites:

- Use the 'safe search' feature on search engines such as Google.
- Don't click the links that are shown in junk email (spam)
- Think carefully about the keywords that you use to search with.

## Description of issues with the Internet regarding information

### UNRELIABLE INFORMATION

Just because something is written on the Internet does not necessarily make it **true or correct**. **Anyone can make a website** and a lot of the information held on these websites is **never checked or verified**.

Wikis (like Wikipedia) allow anyone to change the information held on the site. This means that sometimes what is written is completely incorrect.

In fact, some websites **deliberately set out to fill their pages with incorrect information** just to cause a nuisance

#### **Ways to check that online information is correct**

1. Use **well known websites** that you have heard of (bba, yahoo news etc).
2. Use **official websites** (band websites, football clubs etc).
3. **Verify the information by checking it on several different websites**. If each one says the same thing you can be sure its correct.
4. Try and **stay away from sites where just anyone can post the information** (like ask.com or answers.com).
5. Use websites that are **updated regularly**. Fake websites are not usually kept up to date as much.

to people.

### UNDESIRABLE INFORMATION

Undesirable websites are those that include **content that is offensive to individuals or even races**. Undesirable content can include:

- **Pornography**
- **Violent videos or images**
- **Content promoting hatred**
- **Racial content**

We **cannot fully censor (block)** this type of content from the Internet as many of the sites are based in **Countries that do not have laws against it**. However you can take steps to reduce the chance of you accidentally stumbling across undesirable information:

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### **Ways to avoid undesirable information**

- 1.** Stick to **well known websites** that you have heard of.
- 2.** Use **built-in search engine filters**. Google has a feature which will exclude search results that contain undesirable content.
- 3.** Use **parental controls** which are built into most modern browsers. These block access to many undesirable websites.

## **APPLICATION OF INTERNET RESOURCES TO EDUCATION**

The Internet offers a world of information in one place. It is a helpful tool in communicating and researching all different subjects. It is also a great way for students to use computers with proper supervision. The Internet helps students develop their computer skills. It can also help students with their writing skills. In some forms, the Internet can help students with critical thinking skills. Students are faced with more information than they could ever use or need. This requires them to sort through the information and decide what is most important and relevant. With e-mail, students can have contact with other students around the world studying the same things they are. The Internet can be a huge source for student trying to look up information for a college project or do homework. It also eliminates barriers for handicapped students who may have trouble getting to a library. It allows all students to have access to information whether or not their family has a set of encyclopedias.

The Various Internet Resources are available for Education are:-

**Research:-** The Internet is a powerful tool for assisting students and educators with conducting research. Going to a library and searching through a card catalog by hand can be laborious and inefficient compared to searching for the same information on a computer. Many college offer online library systems which allow students to find information on books using lab computers, or to access databases of scholarly articles that they can read online.

**E-Learning:-** One of the most powerful benefits of the Internet in higher education is its role in e-Learning. E-Learning uses course materials that exist entirely on a computer or the Internet. Some schools offer courses that are entirely e-learning based, meaning all texts, assignments, quizzes and tests are accessible online and no face-to-face meetings are required. E-learning allows students with limited mobility or inflexible schedules to take courses and study at times that are convenient for them. E-learning also allows students to learn at different rates; one student could go through a certain course and finish it in half the time of another student. Many brick-and-mortar colleges and universities offer online courses or have courses with aspects of e-learning, such as online quizzes and exams.

**News & Current Events:-** The Internet allows students to read the latest news of a certain subject they are studying. If they are studying Indian politics they can do a news search and find out what is happening in the world of politics at that very moment. This can help them connect what they are learning to the real world. It can also keep them interested in a subject. Students may have longer attention spans with technology than with other forms of traditional learning.

**Blogs:-** Blogs are interactive websites where users can provide commentary about some information, news on a topic, or online journals.. Unique to blogs is the ability to interact with other people by posting comments and information on the blog. This is great communication and discussion tool for teachers to use with their students. Teachers can post information on the blog and students can interact with the teachers and with one another on the blog.

**Email:-** Email continuous to be one of the most popular ways to communicate online. Teachers and students can quickly communicate with each other and teachers can send out mass emails to all their

students or parents. And now, parents and teachers can be assured that their kids are safe with email services specifically for children.

**Shopping**:- the internet is a vast resource of materials for educators. It is often easier to purchase educational items on the internet that are hard to find in local stores. It can also be a time-saver for busy teachers.

**Streaming Video**:- another great tool for educators is streaming video. As the technology for online video grows, so do the possibilities for its use in education. Lot of studying related videos is available online. Students can use their videos for their education related purposes.

**Online Schooling**:- with so many people looking to further their education, online schooling has become very popular with educators. Teachers, librarians, and administrators can work during the day and "go" to school at night via online schooling.

**Resources**:- in order to be successful as an educators, you must have the appropriate resources at hand. Success as a teacher means being prepared. That is why the internet is such a great resources for teachers. Practically anything you would need to teach a great lesson is available at your figure tips.

**Social Networking**:- Social Networking has become a major way for groups of people to communicate , share ideas, learn about one another, and build relationships. This internet tool can be handy for students to help one another and for teachers to communicate with their students and parents. This aspect of internet will continue to grow as more uses for it are discovered.

**Information**:- the internet has become the single largest source of information in the world. That makes it a very important tool for the educator to use in the classroom. With careful filtering and diligence on the part of the teacher, children can harness the power of the world wide web to learn about any topic that might taught in the classroom.

**Professional Development**:- the internet is a very useful tool for training educators. Administrators can train teachers and other educators right where they are at using web-based trainings. Trainers can provide cheaper training more often without the cost of travel and school systems save money. The internet also provides a wider variety of training options that would not otherwise be available for all educational systems.