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## UNIT 3 WEB APPLICATIONS II

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### 3.0 INTRODUCTION

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As discussed in the previous unit, Internet has many applications for its user. In the recent times, one of the major applications of Internet has been the Web 2.0 technologies that are identified by more interactive Internet based applications. Some of the popular technologies used in Web 2.0 include XHTML, Cascading Style Sheets (CSS), eXtensible Markup Language (XML), Asynchronous JavaScript on XML (Ajax), Ruby on Rails, Adobe Flex, Java and its frameworks, PHP, ASP.net and many more. The aim of this unit is not to introduce you to these technologies but familiarize you with some of the important applications that have been developed using these technologies under the Web 2.0. These newer applications are allowing you to do a number of activities that were unthinkable in the last decade. Today, you can go to social networking sites through which you can find and remain in touch with your friends. You can share your pictures, videos, ideas with them. You can go on to make many new friends. You can also register and study through online means. You can get access to online study material, tutorials, feedback system and so on. Thus, internet has the ability to transform your life. However, you must use Internet intelligently otherwise it can be very distracting also. You must use the online activities for benefit and advancement of your career.

This unit is an attempt to provide you information on some of the popular applications of the Internet in recent times.

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### 3.1 OBJECTIVES

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After going through this unit, you should be able to:

- define the purpose of e-learning;
- describe the processes in e-learning;
- explain the use of Wiki;
- participate in Collaboration on the net;
- take steps to do Social networking; and
- create a simple Blog.

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## 3.2 E-LEARNING

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E-learning is one of the most used terms on the Internet that describes any form of learning that is facilitated academically by the electronic means. Such means may be in the form of multimedia rich contents, web based lectures and web based tutorials or training programmes. In general, E-learning is strongly supported electronically by the administrative, academic and assessment processes.

Some of the activities that may be done using such electronic form using web sites include providing multimedia based contents, providing assignments, conducting on line tests, lectures or discussions through web conferencing, feedback on students work, student progress report to faculty etc.

Some of the major advantages of E-learning are:

- It allows creation and fast update of online contents.
- You may use the contents at your own pace and convenience.
- E-learning also provides a possibility of standardization of contents that can be changed much faster.
- It has the potential of providing new learning opportunities.
- It has the possibility of student's interaction.
- Flexibility of programme/course management such as student may choose courses of their choices.
- Allows creative development of new courses in specific areas.
- E-learning brings people together and allows sharing their experience and thoughts.
- You can do an e-learning programme from anywhere in a much easier way.
- It allows expanding boundaries and gain knowledge without having to leave home.
- Overall, in general e-learning allows saving of resources.

Some of the key requirements for a good e-learning system are:

- A successful e-learning system depends on good student interaction, self-motivation of individuals.
- A student has to study in an effective manner. This is essential as there is no teacher to motivate or drive the student.

### 3.2.1 E- Learning Processes

Since, any e-learning project checks your achievements against a learning outcome, therefore, it starts with identification and verification process. The common process used for this purpose is the use of Username and Password. You are asked to login to the e-learning system before you start using it.

Once you are successfully logged in to the system. The e-learning topics or contents are presented to you topic by topic. This content may include text, graphics, video, audio, animation, link to other references. In general, such content may be followed by some quiz or questions that try to access your understanding about the topic that you have studied. The e-learning systems may be a Learning Management System (LMS) or Content Management System (CMS) running as the base system. These systems help in recording information about you - such as time spent by you on a topic, marks scored by you in a feedback quiz etc. All such information may be sent to the content designer as a feedback, who in turn may modify the content on the basis of

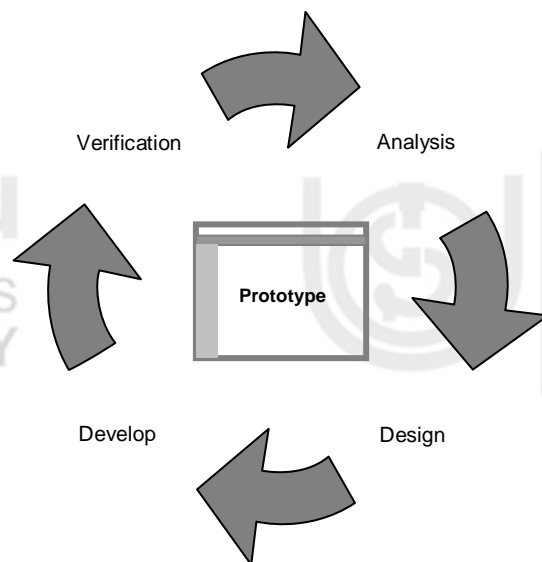
the feedback so obtained. Thus, an e-learning system supported by LMS or CMS will have different types of users who will have different access rights. For example, a student may be allowed to see the contents of the courses s/he has registered for, his/her scores in various quizzes and assignments, whereas an instructor may login to correct the specific content, load an assignment for the student or a new video for the student, provide a link to a new important material, look into consolidated student response and identify weaknesses in the contents, identify the students who are defaulting and find ways to contact those students may be using SMS. Thus, the technology provides a number of ways a teacher and a student can communicate with each other through the e-learning system. Please note that e-learning technologies are available in the present time, only that they need to be properly harnessed for the proper teaching learning process. Some of the activities that may be undertaken by students in the e-learning process:

- Login.
- Content access and assimilation.
- undertake formative assessment online.
- formative assessment using assignments and discussions.
- Getting the feedback on formative assessment and working towards achieving learning outcomes.
- Communication with the students through various means like; email, chat, SMS, and other means.
- Go through a summative assessment.
- Measuring the effectiveness of e-learning and performance assessment.
- Recoding student achievements and certification.

Please note that it is not necessary that all the e-learning system have all such activities. However, a good e-learning system should have most of these activities.

### 3.2.2 E-Learning Content Development Process

Developing E Learning contents is a specialised activity. The quality of e-learning relates to achievements of the objectives of the content by the learners. Better quality e-learner content can be created if you follow a proper process of e-content generation. A simple e-learning content process is given in the Figure 3.1.



**Figure 3.1: A simple development process for development of e-learning contents**

**Analysis Phase:** Analysis requires identifying the learning objectives for the development of content for the target audience. This phase also lists the financial, technological and time constraints for the e-learning project. It also enables identification of the gap between the expected knowledge of the target audience and what they should know after going through the course. This facilitates the design phase.

**Design Phase:** In most organizations the design phase involves development of a storyboard that may include a concept flow, text, graphics, video, audio, animation if needed. In this phase you may also design the basic questions that must be answered by the learner after going through the learning content. You may also design the interface and interactivity during this step.

**Implementation Phase:** Implementation phase brings the design to live course material. You may take the help of various experts for this phase including content expert, graphic expert, interaction designer, web designer etc.

**Verification Phase:** during the Verification phase the contents so produced can be tested to determine if it is conveying what it is expected to convey. It may also be used to check the usability features of the product. You may perform verifications by e-learning experts or sample of target audience.

### 3.2.3 An Example of E-Content and Support - IGNOU

IGNOU uses two different e-platforms for providing learning and support. The first platform provides several programmes from the website <http://www.ignouonline.ac.in>. This web site support many features starting from online admission to delivery of contents and online discussion sessions. Some of the screens demonstrating these activities are shown in the Figure 3.2.

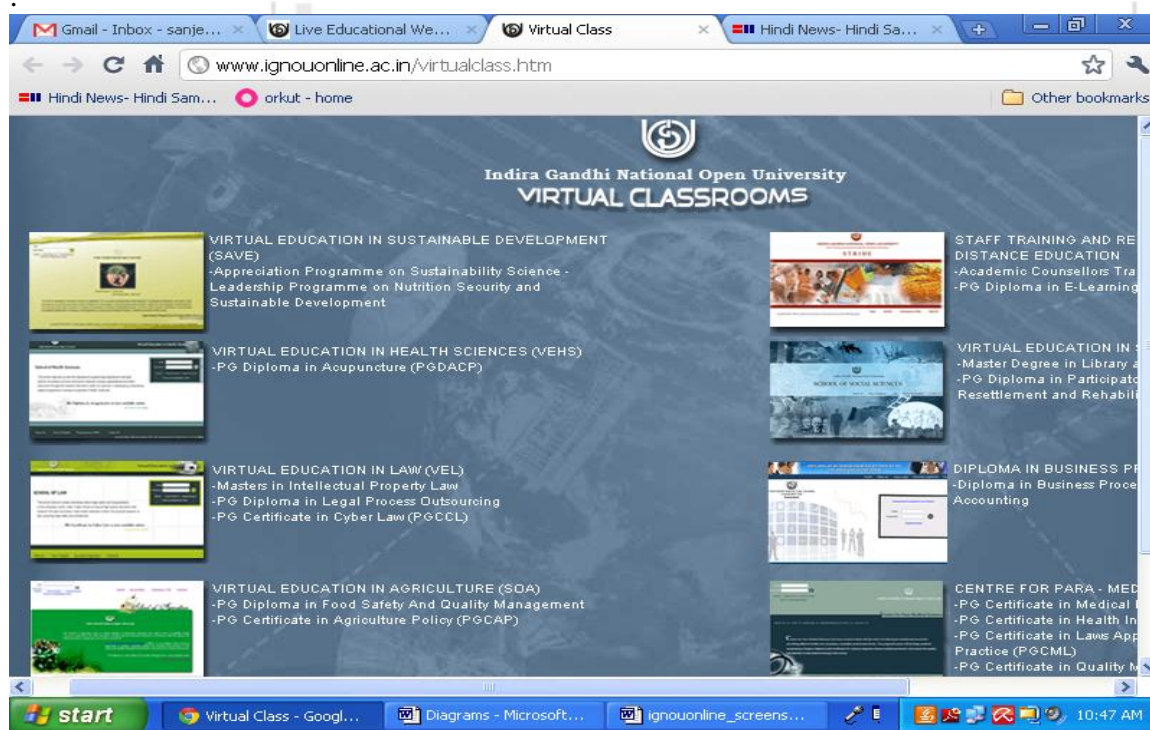


Figure 3.2: IGNOU online programmes

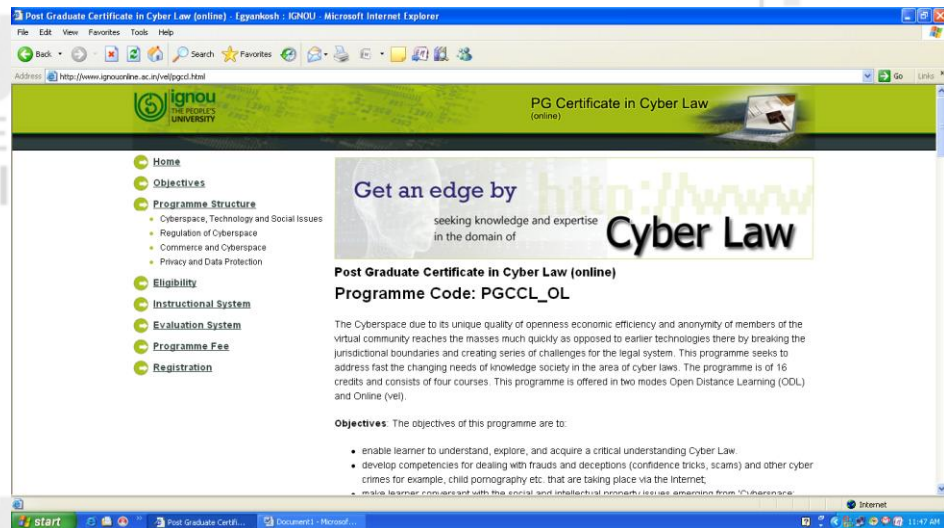


Figure 3.3 : An online programmes of IGNOU

The second platform that is under development at IGNOU is based on IGNOU wiki which is supported by the MOODLE like learning and content management system. The model of e-learning as conceived at IGNOU is given in Figure 3.4

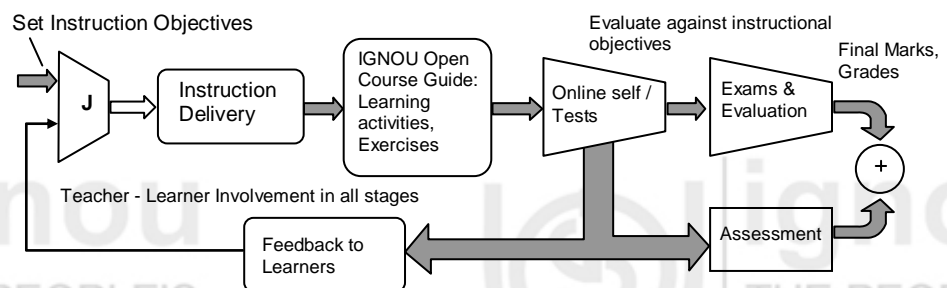


Figure 3.4: One of the Proposed e-learning Model of IGNOU  
(Source: Presentation of Prof K. Srivathsan, ProVice Chancellor, IGNOU)

Detailed description of each block is outlined below:

**Input Block ‘J’:** ‘J’ here stands for judging the gap between set instructional objectives in a learning module such as a Unit or a Block TO the understanding achieved as measured by the Self Test or in the interactions in discussions.

**Instruction Delivery:** Instruction Delivery may use different modes.

- It may be the conventional class teaching. (please note that this model even envisages the classroom as well as e-learning)
- It may be recorded Video Lectures being used by a counselor for a group of students.
- It may be the Self instructional material (such as this block itself) designed and developed for a course by IGNOU
- It may be the programme portal like ignouonline or any other e-Content Website of IGNOU.
- Any hybrid of these modes may also be employed.

**IGNOU Open Course Guide (IOCG):** The open course guide is an extended version of your Programme Guide. The objective of introducing the IOCG is to help student



with information about a course and also to provide information on good supplementary content. IOCG may be maintained by the Course Management Group.

**Online/Self Tests and Feedback to the Learners:** A good education system is one that provides feedback to its learners at several stages of study in a course. This feedback may be provided using self tests that try to determine how much they have understood against the instructional objectives stated in the Block/Unit of study. At present these tests are in the form of Check Your Progress exercises in your study material. These tests may be conducted in the future typically using online platforms like Module LMS or even on a Wiki.

**Assessment:** You as a student has to undertake formative assessment with feedback that finds out the extent of fulfillment of objectives of the learning. At present assignment are the tools to do such assessment. However, in a e-learning system a number of possibilities exists that may be used in the future. Some of these activities may be student participation and engagements in specified learning activities like practice sessions, group discussions, laboratory experiments, term papers, critical writing, etc.

**Examinations and Evaluation:** This is a part of Summative assessment of the student achievement. The overall course may have a term-end examination. At present, such examination is through a formal examination system. However, with developing technology may be in future, it may take a different form. For example, some part of the summative assessment may happen through on-line examinations as is already being done for various professional certification and entrance examinations.

The details on Vedydhara are given in the section 3.3.

### 3.2.4 Modular Object-Oriented Dynamic Learning Environment (MOODLE)

MOODLE is a free and open-source e-learning software platform. It provides feature for Learners and content management. In the past decade, it has become very popular for the delivery of e-learning content and student management. You can get access to information related to Moodle for the website <http://www.moodle.org> (Please refer to Figure 3.5). Alternatively, you may download the Moodle software and create your own server having Moodle



Figure 3.5: Home Page of MOODLE

To access the MOODLE and learn about it from the Moodle website, you may need to create an account. The process of creation of an account with Moodle is somewhat similar to what you do for creating any Internet based account like email account.

The popularity of MOODLE may be attributed primarily to the fact that it is free and it allows dynamic content creation facilities. It has a number of tools available for managing a number of students online. In addition to content management, MOODLE provides a number of tools for building interaction among the learning community. Thus, allowing collaboration and peer to peer learning in the learning communities.

The best way to learn MOODLE is read tutorial on MOODLE from the MOODLE website. The main content page for this website is shown in Figure 3.6.



Figure 3.6 : MOODLE Course page

Finally, please note that these days there are several standards which have been developed for standardization of learning contents. MOODLE supports most of these standards. A detailed discussion on these standards is beyond the scope of this Unit.

### 3.2.5 Advantages and Disadvantages of E-Learning

Before we discuss about advantages and disadvantages of e-learning, you should know that e-learning is just another model for learning. It is not that it can replace all other forms of learning models. However, it provides several opportunities that may be of benefit for creating certain learning instances. Some of these opportunities are:

- It allows possibilities of course material but that require constant support of a course team.
- The level of participation of student in learning may improve as it provides anytime, anywhere learning, but in any case the student has to be motivated by the course team from time to time.
- E-learning does improve the IT skills of individuals and may improve their time management skills.
- The content like recorded lectures may be viewed by a student at any time, however, the interactive support that requires teacher at the other end may still be available in slotted time only.

- It allows you to measure student activities very easily, but beware too much of interference in student style of learning is not advisable.
- E-learning gives flexibility in curriculum design and reuse of contents, however, the expert team has to work constantly to make that happen.
- The general understanding of e-learning as cost effective mechanism is often misleading. Please note that first e-learning is about teaching-learning process. Any good teaching-learning process is rigorous and requires substantial costs.

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### 3.3 ELECTRONIC EDUCATIONAL RESOURCES

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In the present era, you can get access to a large number of electronic educational resources through the web. These resources may be on different specialized areas. These resources include the electronic journals, encyclopedias, dictionaries, digital libraries, educational resource databases, indexing and abstracting databases and electronic books. However, please note that some of these resources require paid subscription. These resources allow you to browse through the abstracts, search on various topics, and access the complete information for research in specific areas. Some of these electronic resources are listed below:

#### E-Journals and Databases

- ACM Digital Library
- EBSCO database
- IEL Online
- JSTOR
- Lawyers Collective Magazine
- Lecture note in Mathematics
- Maths Sci\_net
- Project Muse
- ProQuest
- Springer Link
- Taylor and Francis

#### WTO E-library

#### Indexing and Abstracting Databases:

- LISA
- J-Gate

#### E-Books

- Credo References
- Idea-Reference Resources
- NetLibrary

#### WIKI

Wiki's are a powerful tool for creating collaborative knowledge resources created by the community. A wiki is a page or collection of Web pages designed to create and edit contents. Wiki supports hyperlinks and has simple text syntax for creating new pages. Wiki's are also used to create websites, to enhance the features of community websites and for knowledge management. The collaborative encyclopedia, Wikipedia ([www.wikipedia.com](http://www.wikipedia.com)) is one of the best-known wiki's. It contains very large number of articles – all created and moderated by the community. Ward Cunningham developed the first wiki software - WikiWikiWeb in 1995.

Wiki stands for "What I Know Is".



### Characteristics of Wiki

- A wiki invites all registered users to edit any page or to create new pages within the wiki Website.
- Wiki promotes meaningful topic associations between different pages by making page link creation very easy.
- Wiki promotes discussion and also keeps the history of changes of a document.

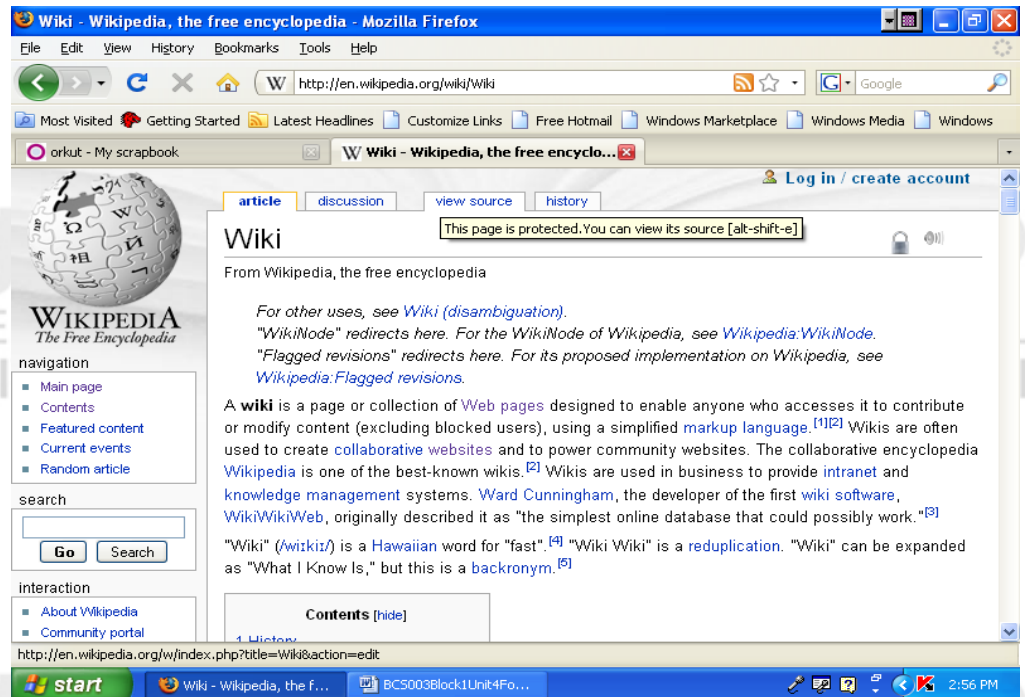


Figure 3.7: WIKI in Wikipedia

You can write documents in a wiki using a markup language. You can see a wiki page using web browser. Wiki pages are connected through hyperlinks. So in general, a wiki is database for creating, editing, browsing, and searching through information.

Another example of wiki ( as stated in section 3.2) is Vedyadhara, also called the IGNOU Open Course Guide (iocg) wiki. The figure 3.8 shows the home page of Vedyadhara of IGNOU <http://vedyadhara.ignou.ac.in/wiki/>

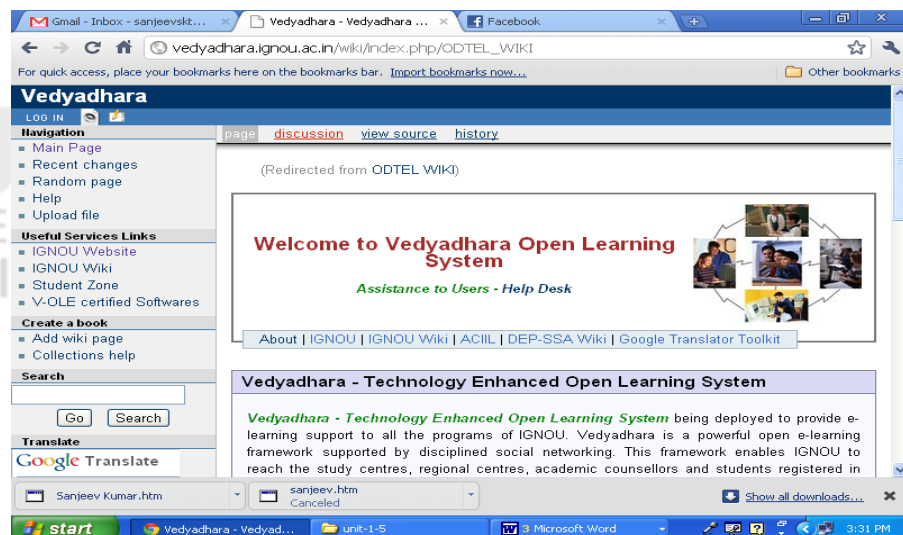


Figure 3.8: Vedyadhara wiki

Vedyadhara is a website that uses specific wiki software for user creation and editing of web pages. In the case of IGNOU, the wiki software used is Media Wiki – the same software used by the famous Wikipedia. It is a simple system that enables creation of web pages without knowing the Hypertext Markup Language (HTML). It requires only common word-processing skills, and knowledge of some Media Wiki tags to work. Vedyadhara may be used in the future for administrative and academic activities such as:

- Curriculum Design documents
- Compilation of documents
- Keeping daily records as well as personal information
- Developing Learning Materials in a collaborative manner

Vedyadhara will provide following information about various courses:

- Course Objective
- Course concept map which links to learning module
- Sequence of learning modules
- Course support and counseling details.
- Course calendar
- Assignments are uploaded
- Course evaluation approach
- References, web references
- Video lectures by IGNOU and other lecturers.
- Instruction team and contact details.

It further plans to have prerequisite quiz for students to check that they have a basic knowledge for taking up that course and feedback system given by students to the course team.

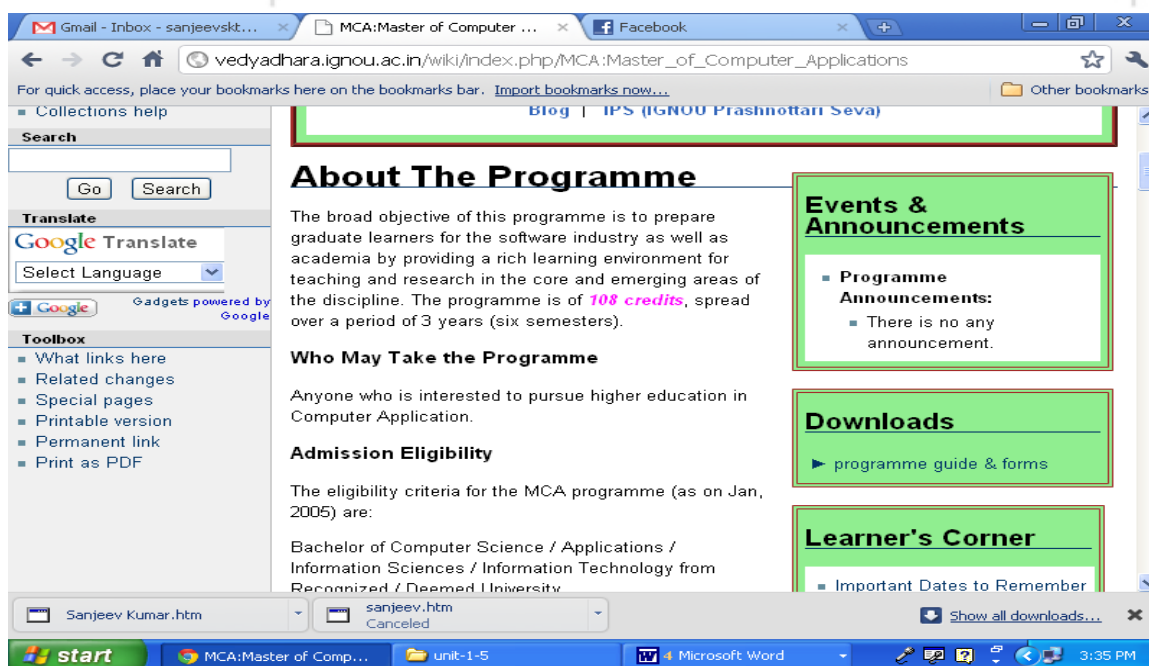


Figure 3.9: A Programme Page on Vedyadhara wiki

**Check Your Progress 1**

1. What is eLearning? Compare e-Learning courses with traditional, on-campus courses?  
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2. How do e-Learning classes work?  
.....  
.....
3. How is e-learning useful for Universities?  
.....  
.....
4. What is wiki? How is it useful?  
.....  
.....
5. What is MOODLE?  
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.....

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### **3.4 COLLABORATIONS**

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Collaboration is defined as an act or process of working together on a project or some intellectual activity.

But what is the importance of collaboration? The world is increasingly becoming globalised on issues like environment protection, control of terrorism, international business, learning etc. In such changing circumstances, even the scientific explorations have become collaborative. Thus, in this global world, role of the Internet tools is to enable collaboration among people. From this perspective chat, news groups, wikis all are some basic tools for collaboration. Collaboration involves both communication and sharing of ideas. Modern day science, to certain extent, has become collaborative. Today, you may find a number of research papers coauthored by many people staying at geographically diverse places.

Each collaborative project has several social, political, ethical and technical issues that are to be addresses at the start of the project itself.

Some of the key questions a distributed collaborative project needs to address are:

Will cumulative wisdom emerge from the collaborative efforts? After all a collaborative project also requires good investment. Several research papsers have been written about the broad set of success measures and factors that are responsible for successful collaboration. You may refer to further readings given at the end of this Unit for more details.

Some of the areas where collaboration has been found to be successful is the area of physical science that requires huge investment in expensive devices. However, if the already existing labs can do a distributed collaborative attempt then the overall cost of a project may be reduced. One such area may be the high-energy physics. Another important area in this direction may be Health Sciences. Some of the complex data intensive problems including genetics, neurology, biomedicine etc. may require international participation. The third important area for collaboration is the Environmental Studies, this also require wide spread data collection and involvement of large communities. Some of the topics of concern may be the ecology. The latest

discovery of new species of plants and animals are result of collaborative efforts. The earthquake data and global tsunami warning system may be based on worldwide collaboration.

As stated earlier, most of the tools used on the Internet can be used for some form of collaboration. However, we would like to show an example of collaborative tool for student. Google Docs is one such tool that may enable you to create a collaborative project report online. You may create a document using it and share it with your colleagues who in turn may be able to add content to it from anywhere, edit it and discuss about it using a discussion group. For example, you want are writing a research paper with few other writers. You may create a draft report that may be edited by other writers online. Please note that in such a case all of you are working on the same document. Please note that this document may be a spreadsheet or presentation or just text document.

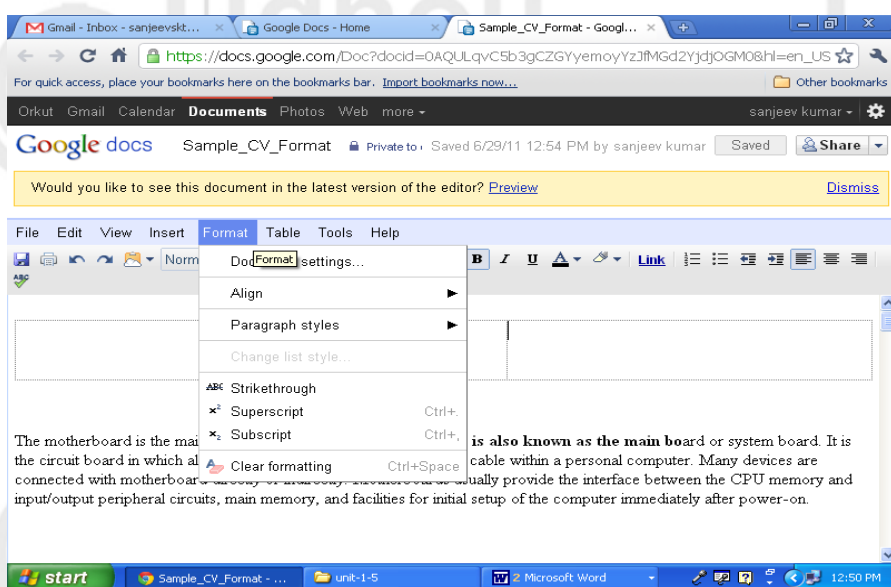


Figure 3.10: Google Docs

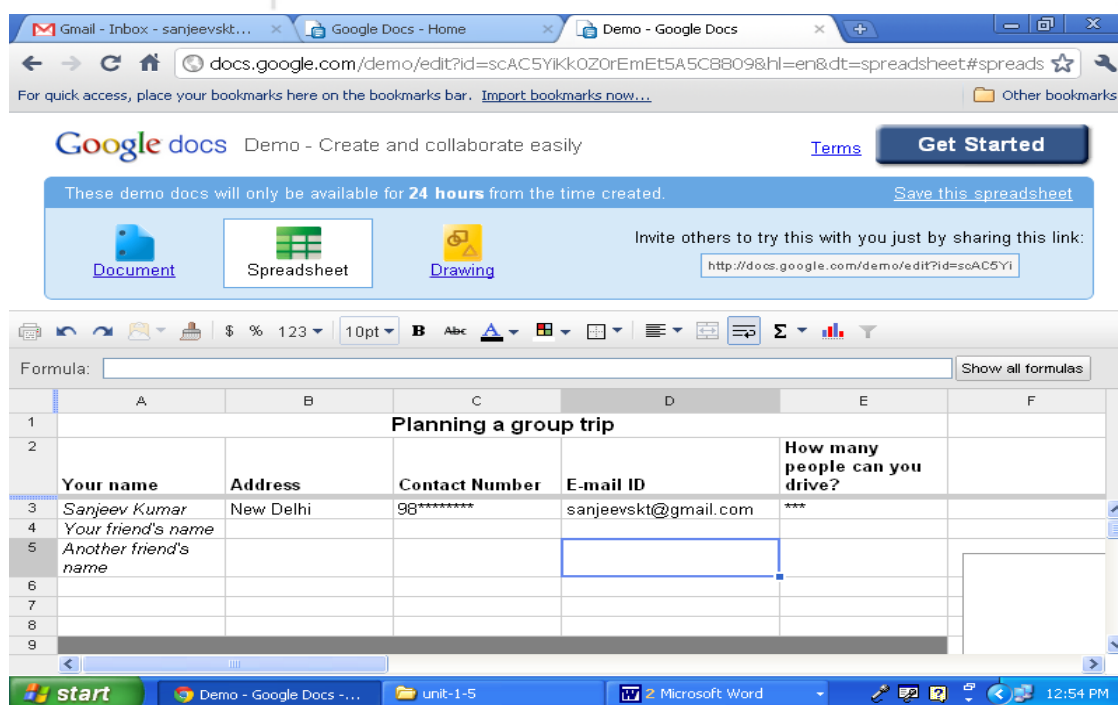


Figure 3.11: Google online Spreadsheet

Similarly, such kind of collaborative activity exists in the Microsoft Office 2010 and Adobe Acrobat. In addition, there are many tools available on Windows and UNIX for collaboration.

Another software that can be used for collaboration is Google Wave. It allows you a shared web space for discussion or working together in a group. You may use text, photographs, maps etc for this purpose. This software also combines collaboration with email, chat, messaging etc. The following figure shows a sample screen of Google wave:

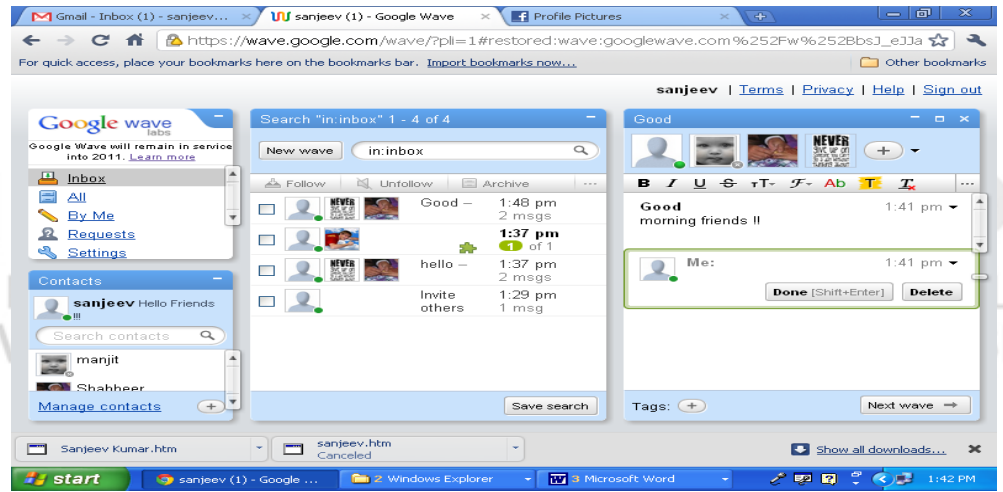


Figure 3.12: Sample Google Wave Screen

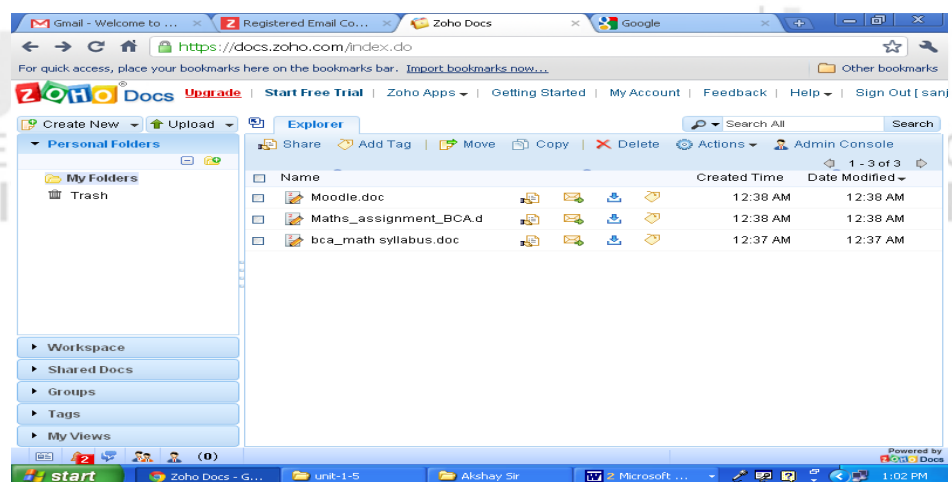
There are plenty of other web-based collaboration tools. Here are a few of them:

### MediaWiki

As discussed earlier, Media Wiki is the software in which Wikipedia and IOCG wiki of IGNOU have been developed. It is a very simple tool that allows multiple people to make and commit changes in a document. It keeps the version of each change. Many Universities have used this software to develop a collaboration space.

### Zoho

Zoho is a division of ZOHOO Corporation, a US-based Software Company. Zoho is a very good site for collaboration. It not only allows simple mundane tasks like group editing, document sharing, group chat, etc but also provides some management tasks like milestone tracking, invoice creation, and other team tasks. The figure 3.13 shows the screen on Zoho. For more details on Zoho, you may visit the website:





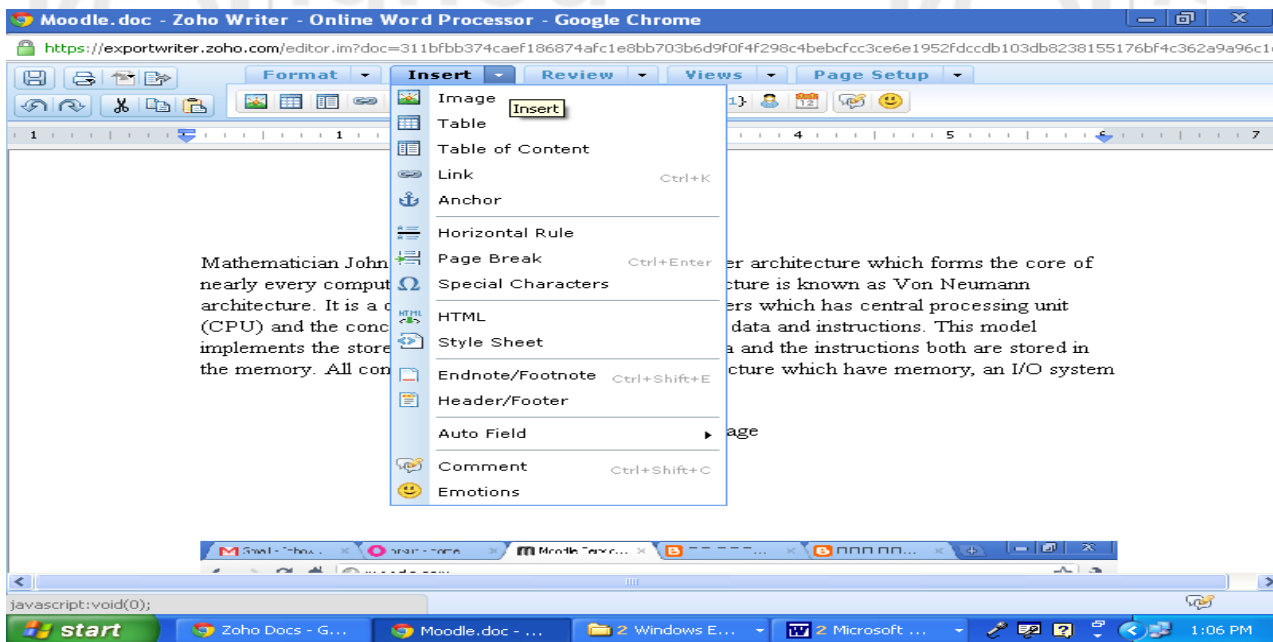


Figure 3.13 : ZOH0 docs and word processor

### Volunteer Computing:

A somewhat similar concept to collaboration is the concept of volunteer computing where you allow your hardware resources to be used for the purpose of some online project. One such project that is hosted by Space Science Laboratory at the University of California, Berkley is for Search of Extra-Terrestrial Intelligence called SETI@Home. This project employs a software platform called BOINC that you need to download in case you wish to part of the project. Once, you become part of the project then your computer executes some of the data that is constantly being received from sensors. This project has paved the way for volunteer computing but has not located any Extra Terrestrial so far. You can obtain more details on this project from the website <http://setiathome.berkeley.edu/>. Researches in Taiwan are making an attempt to use volunteer computing to visualize earthquakes.

## 3.5 SOCIAL NETWORKING

A social network is a network of individuals which have some sort of interdependence on each other. This interdependence may be in the form of friendship, kinship, common causes and so on. A Social networking service may be offered through a web site on the Internet. Some of the popular social networking services are – Orkut, Facebook, Twitter, LinkedIn, MySpace, Friend Finder, Yahoo! 360, Classmates and many more.

You need to register to a social networking service in order to use it. Some of the features provided by these services are:

- Creation of a profile page of your own informing others about the information that you would like to share about you.
- Viewing of profile pages of others.
- Creating your own network of friends.
- Searching online friends.

- Putting your albums online for your friends.
- Sharing your thoughts and experiences.
- Sharing of audio and video may be through YouTube – a popular website where you can put your videos for general public viewership.

The Social networking technologies have opened up a new way for information and knowledge sharing. Social networking allows instantaneous communication of information to large audience. It helps in generating large scale public response to emergency situations that may occur during disaster. One such use of social networking and mobile technology is cited in the further readings, where these tools were helpful for emergency rescues, and gathering and disseminating real-time information by government agencies, in the case of typhoon disaster in Taiwan.

The figure 3.14 shows a screen of common social networking services :



Figure 3.14: A Sample Social Networking Service

Social networking sometimes can be potentially unsafe. **You are advised not to put any confidential information about you on such sites.** You must use such services for good reasons and not misuse them. Some basic security policies for such sites are:

- Please do not share your account related information such as username and password.
- Always scan your computer for viruses and spyware.
- Do not add strangers as your friends about whom you are not sure about this/her identity.
- Always make sure to sign out once you have done your intended activities
- Restrict the individuals who may see your profile.
- Do not use bad or aggressive vocabulary on such web sites.
- Do not allow people to use such sites for unlawful purposes.

## 3.6 BLOG

Blog is a website where entries are written as information or news on a particular subject. You may choose any subject for writing a blog like food, health, or information about IGNOU dates etc. A blog may combine text, images, or other media components; however, most blogs are textual. They may also provide links to other web pages or blogs. In addition, blog allows you to leave comments in an interactive format. Blogging is becoming increasingly popular among students as it allows you publish and keep record of your ideas over time. In addition, you may get some useful comments on your ideas may be from your teacher or your peer group or other people. A blog need not be restricted to a single author; it can merge different kinds of ideas, including fellow students, teachers, and subject specialists. An example: <http://edu.blogs.com/>.

Blogging is emerging as wonderful way to share and publish your views. Most famous person these days have their own Blog.



Figure 3.15: Few Blogs

Many famous personalities these days are hosting their own blog. The following is one of the many websites through which you can create your own blog.



Figure 3.16 : One of the website that allows you to create blog

Following are the list of some of the types of blogs that are currently in use on Internet. We have not given graphical examples of these blogs. You must explore blogs on internet itself.

- Corporate and organizational blogs – may be used for projecting organizational culture and market branding.
- Category based blogs – blogs on particular subject like travel, health, environment, music, education and many other.
- Blogs having different media and device types – a blog having only videos may be called *vlog*, having only links may be called *linklog*, there are many such categories, a log for mobile devices may be called *moblog*. The collective community of blogs is known as the *blogosphere*.

### How to Start Your Own Blog

- a good blogging service provider. You may select blogging service providers like LiveJournal, Blogger, WordPress.com, Xanga, Tumblr and Webs. Most of these services provide templates for creating and publishing blogs. You may be able to choose colours and layout for your blog.
- You can make a blog public or private based on your requirements. A private blog may be password protected.
- Make few sample postings and test your blog for the look and feel. After completing the blog publish the URL of your blog on your website.
- Visit and leave comments on other blogs leaving your blog address so that they can also make a visit to your blog.
- Update your blog frequently so that when people return they have something new to read.

### Some Issues while blogging

Blogging may result into some unforeseen consequences including legal liabilities, therefore, you should be very careful while blogging. You should never release any confidential information about you or any other person or organization. Please do not use any defamatory language against anybody in a blog. Please do not discuss office



matters through blogs. Please be very careful of the language you are using on the blog, it should not be offending, aggressive or abusive.

### Check Your Progress 2

- 1) Why is collaboration used on Internet?

.....  
.....

- 2) What are the different ways of sharing information through Internet?

.....  
.....

- 3) Explain the advantages of Blogging.

.....  
.....

## 3.7 SUMMARY

This Unit highlights some of the popular applications of the Internet with the advent of Web 2.0. This Unit is not about the technologies but about what are the different applications and how can you use those applications. The Unit first have introduced you to e-learning applications. It highlights the IGNOU e-learning model and the way you can access IGNOU e-learning. The unit also introduces you to the process of creation of e-content. The Unit also provides information on educational resources that can be found on the Internet. In addition it provides information about the usage of wiki. IGNOU may be using Vedyadhara wiki for its courses. A Wiki is a collaborative community website where you can compile and publish the information posted by different registered users. We have also discussed topics such as collaborations, social networking and blogging. Collaboration allows us to participate in different projects from our own places, social networking allows us to share information with friends and blogging allows us to publish information online. A word of caution – “Please use all these applications judiciously, beware we do not know how someone may misuse information about us.

## 3.8 ANSWERS TO CHECK YOUR PROGRESS

### Check Your Progress 1

1. E-learning is electronic based learning that uses latest technologies to support the delivery of training or education. E-learning as far as reach and access is concerned provides better opportunities for the learner. In addition, if e-learning uses Content and Learner Management System then can provide useful tips for teachers about the learners and usefulness of content. E-learning can also support interactivity.
2. First of e-learning need not necessary be conducted as a classroom lecture on the Internet. It may be a recorded lecture or a session in which student undertakes the study of learning content created for the purpose of e-learning. Thus, you can learn through online study material, you can interact with the teacher using email or synchronous chat, do online quizzes or assignments, participate in discussions.



3. E-learning can be used in many ways by the Universities – may be for delivering online distance learning programmes using leaning contents, or blending e-learning with other face to face courses. In both the cases, there is an opportunity to enhance the quality of learning.
4. Media wiki is software that enables collaborative, dynamic creation of websites called wikis that can be used to provide information about an organization. Wiki is useful as it allows editing of the content without any problem in a collaborative manner.
5. MOODLE is a open source software that is very popular these days as a content development and learner management system. It is very popular among teaching communities for development and delivery of educational programmes.

### Check Your Progress 2

- 1) The collaboration helps in sharing of resources. These resources may be your intellectual efforts, hardware computing power or any other form of activity. Collaboration helps in solving complex problem domains by distributing the problems.
- 2) You can use e-mail; messenger services, Chatting to share your ideas, knowledge, and feeling. You can join social networking sites and create friends group to share your information. You can use websites to publish huge amount of information on Internet.
- 3) Blogs if used properly can help your expression. It has the potential of preservaing your ideas, getting comments on your ideas and developing your ideas.

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## 3.9 FURTHER READINGS

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1. Book titled “Scientific Collaboration on the Internet” Edited by Gary M. Olson, Ann Zimmerman and Nathan Bos. (Year of Publication)
2. [www.wikipedia.com](http://www.wikipedia.com)
3. [www.facebook.com](http://www.facebook.com)
4. [edu.blogs.com](http://edu.blogs.com)
5. [www.mynewblog.com](http://www.mynewblog.com)
6. [www.ignou.ac.in](http://www.ignou.ac.in)
7. <http://setiathome.berkeley.edu/>
8. [www.google.com](http://www.google.com)
9. [www.zoho.com](http://www.zoho.com)
10. <http://www.moodle.org>
11. Web 2.0 and internet social networking: a new tool for disaster management?-- lessons from Taiwan, Huang CM, Chan E, Hyder AA, Public Med.gov at <http://www.ncbi.nlm.nih.gov/pubmed/20925944>; Source-International Injury Research Unit, Department of International Health, Johns Hopkins Bloomberg School of Public Health, 615 North Wolfe Street, Suite E-8132, Baltimore, Maryland 21205, USA. [chuang@jhsphe.edu](mailto:chuang@jhsphe.edu)
12. <http://www.wikihow.com/Start-a-Blog>