TOOLS FOR COLLABORATIVE LEARNING

We will know about the various tools that are used for collaborative learning. For carrying out collaborative learning through ICT, you have to remember that your transaction with the learner will be mostly through the electronic mode. Although to some extent it would be face to face, but most of the time it will be through a computer and could also be through the mobile.

You as a teacher would have to design the activities. You will be using the Internet and mentoring either synchronously (at the same time when you and the learner is online) or asynchronously (there will be a time gap between the learner's query and your response as both of you will not be online at the same time). In some cases, you might not have the chance to come into face to face contact with the learner at all. However, you would have to keep in mind the different media and tools available using which you can facilitate the students in their activities.

The media include the different forms in which the content or resources are available or can be created for use in collaborative learning. The tools are the different software that are available to host these media for effective delivery of your instruction.

Tools for Collaborative learning

The tools for collaborative learning may be classified as offline tools and online tools. Offline tools are those media that can be used on an isolated computer, which is not connected to the Internet. These include softcopies of the documents, slides, illustrations, audio and video files, which can be stored in your computer and distributed through transfer devices, such as data transfer cables, hard drives, memory sticks, CDs, etc. The online tools are those tools which are used when connected to the Internet. These include email, cloud hosted applications, and the Web 2.0 tools, such as messengers, blogs, bulletin boards, discussion forums, wikis, social media etc. You can access these tools on your computer, laptop, tablet, mobile, or other hand-held devices, when connected to the Internet. Let us know more about these tools.

ICT and Pedagogy

We will first look into some of the offline tools.

1) Softcopy of documents: The content for the activities can be created and stored by you in the form of softcopies, for example, in Microsoft Office (MSWord, MS Excel, MS PowerPoint) or Libre Office (Writer, Calc, Impress; www.libreoffice.org) (fig. 12.2), PDF files, and image (e.g., JPG) files. You could create softcopies for the following:

a) Checklist: You could create an MSWord or Writer file for your checklist. This checklist will contain the items that describe the goals of the groups. The checklist may contain the elements that have been described in the previous note uploaded on LMS.

b) Content: You could create the content of the activity in the form of a brief description, the flowchart of the process and other suitable illustrations. You could create all of these in MS Office or LibreOffice.

These could be distributed to the students in the different groups. You need to guide them in studying the material and carry out the activities

c) Table for listing individual contribution and final product of the group: You could create tables containing the expected behaviour of the individual. You could also create a table listing the features of the final product of the group. These tables could be used for evaluation as well.

d) Presentation Slides: In addition to using the available resources, you can create your own content through MS PowerPoint or Impress. PowerPoint or Impress are complete multimedia generating tools that are easily available to us. You can create multimedia presentations on specific topics. You can add text, photographs, animations and videos, and even record your voice in the slides. You can save it in your computer, post it on to your blog, or send it to the students by email. The students should also be encouraged to create their own softcopies of documents and share among the group members, both online and offline.

2) Audio: Audio content is available in various forms, such as nature sounds, music, lecture, interviews, drama, audio books, etc. These are available both online and offline. Websites, such as Learnoutloud (www.learnoutloud.com), and Open Culture (http://www.openculture.com/freeaudiobooks) are examples of web resources containing thousands of audio books, lectures, and audio documentaries for education. You could create your own audio using the online website Soundcloud (https://soundcloud.com/). You can download the file and use it. You can also create your own audio offline by using other recording devices and editing software. All of these can be made available to the students. You could also instruct the students to create their own audios as forms of their expression.

3) Video: Video content is available as features, interviews, documentaries, animations, talks, performances, procedures and processes, etc. These are available both online and offline. YouTube, Teachertube (http:// www.teachertube.com/), Khan Academy (https://www.khanacademy.org/) Watchknowlearn (http://www.watchknowlearn.org/), School tube (http://www.schooltube.com/) and many others. You may use the available videos or create your own video and use them. You may also instruct the students to express their tasks in the form of video recordings.

4) Web Radio: This tool is available online. Web radios or Internet radio, such as Wavestreaming (www.wavestreaming.com) are could be made available for collaborative teaching-learning. The students could be asked to listen to various topics and activities may be designed around these topics. Students can themselves create such radio programmes.

5) Web conferencing: This tool is available online. The Internet enables web conferencing (also known as webinars, video conferencing or e- conferencing and webcast). A webinar is a presentation, lecture, workshop or seminar, which is carried out online through the use of a

software. Some examples of software that support web conferencing are Adobe Connect (http:// www.adobe.com/products/adobeconnect.html), Skype (https://www.skype.com/en/), Google Hangouts (https://hangouts.google.com/),Bigbluebutton (http://bigbluebutton.org/), Cisco (http://www.cisco.com/c/ en/us/products/conferencing/index.html) etc. These enable collaboration and creation of content in both the audio and video formats. You may design activities in which the student groups can use these media to interact among themselves, and record their expressions of their thoughts and ideas. Now you know the various methods of obtaining, creating and storing content. The content thus obtained or created can also be transferred offline very easily through devices. Now let us know about how the content can be delivered online. In all these cases, you will have to open an account in the website of the tool and start creating your collaborative teaching activities.

6) Email Groups: You can create a group of students by taking their email ids using your email. You can create as many learner groups as you want. This way you can reach all your learners of the group at one go. You will be able to send one message, e.g., about the next step of the activity, or intimating them about the time left to complete the task, to as many learners as you want, not just in their emails but also to their mobiles through free messaging services, such as www.way2sms.com .You can send documents, links to webpages, audio and video files through emails. You can also chat through the messaging system of emails.

7) Chat: Chat or messaging system is a convenient way of interacting and collaborating. You can discuss the various issues of the learners one to one or in groups through chats. You can use the chat facilities of Gmail, Yahoo Messenger or Skype, which are commonly used by the learners for social networking. You can also use Twitter and Facebook. Google Hangouts, Yahoo Messenger and Skype also support videos. Mobile apps, such as WhatsApp and Viber are becoming increasingly popular. You can be seen by your students and you can see your students. Skype facilitates transfer of document files, audio files and very small video files. You can also post links to webpages on Skype. Other software tools are also coming up with these features. These facilities can be used for collaborative learning very effectively.

8) Blog: Blog (short form of Weblog) is an online informational website with discussion forum. There are single author and multi author blogs, for example Blogger (https://www.blogger.com/) and Word Press (https://wordpress.com/). The blog contains the information that you want your students to know, and this is succeeded by discussion. There are microblogs that use short content, for example Twitter (https://twitter.com/) and Tumblr (https://www.tumblr.com/). The blogs allow discussion, and posting of digital audio and video. The microblogs allow messaging in addition to the other features. You can create a blog on the Internet where you can post the activities and other topics for the students. You can thus generate a discussion among the learners of the course. This will not only clear the doubts of the students but also allow them to know and interact with the fellow students. The students should be encouraged to create their own blogs and write their views in them, and others should be encouraged to participate in the discussion. You will find that the students are motivated and are ready to share their ideas thereby enriching the blog and the learning process in more than one way.

9) Internet Forums: Internet Forums are websites that have a discussion area. There are various types of Internet forums, such as message boards, discussion group, bulletin boards, imageboards and web forum. The notable examples of Internet forum include Proboards (https://www.proboards.com/) and Blackboard (http://anz.blackboard.com/). In these forums a topic or question is posted and the comments or messages appear as threads. The thread could originate from the initial post as well as from a comment that has been posted on to the initial post. Threaded discussions are used in multiple posts also. A threaded discussion helps to refine complex ideas. An Internet forum allows multiple users to post information, but a blog allows only one person to post the initial information. You may create a post containing a topic or question for discussing ideas.

10) Wiki: Wiki is a software technology to create collaborative websites. This website allows anyone to post information and edit it . The various media that could be used in wikis are software documents, audios, and videos. A wiki does not host a discussion forum. You can create a wiki for collaborative creation of content. This is useful mostly to create and share content generated during activities in your groups.

11) Learning Management System: The Learning Management System (LMS) is essentially a software that is programmed to cater to all aspects of the functioning of an academic institution, right from admission to delivery of content to examination to the award of degrees, including teaching-learning. An LMS can be used for collaborative learning, if it is made available to the teachers and students. It enables teachers to modify the contents as per the students' personal requirements. The LMS enables communication between the teachers and learners, and also between learners through chats and discussion forums. Emodo (https://www.edmodo.com/) is an example of a LMS. It uses GSuite for Education and Microsoft OneNote and Office. If you have access to an LMS in your school, you can carry out all the activities of collaborative teaching-learning in it.

12) Virtual classroom: A virtual classroom is an online learning environment.

It is mostly used for providing distance education. The students and log in

and attend the class synchronously. In addition to the lecture of the online

teacher, ICT tools, such as softcopies of documents, e-conferencing, audio

and video files, etc are used for carrying out the teaching-learning activities in the virtual classroom. It also uses the ICT tools of messaging, discussion forums etc., for asynchronous interaction. Adobe Connect (http://www.adobe.com/products/adobeconnect/learning.html) is an example of a virtual classroom. There are 3D virtual classrooms also that are created by the software Second life , and the students can log in as their avatars. The activities that can be designed in these 3D classrooms are enormous, from museum tours to virtual labs. If you have access to a virtual classroom, you could create and administer the activities of collaborative teaching-learning in it.

Editing tools

There are several ICT tools to edit your photos, audio and video files. These help in addition or deletion of content, or adding special effects to the photos, audio or video files. One of the photo editing tools is GIMP. It allows you to retouch images, or create images. A popular audio editing software is Audacity. It allows you to record and edit the audio files and save it in a range of audio file formats. Windows movie maker is an editing tool that allows you to edit video files. You can cut, compress or add video content in the file using this video editor