

Mathematics and Computing: Level 2 M253 Team working in distributed environments

M253 Resource Sheet

he Open University

Communicating, cooperating and collaborating online

1 Overview

This *Resource Sheet* serves four purposes. Firstly, it provides an overview of the electronic communication and collaboration facilities that have been set up for your team to use. Secondly, it provides an overview of facilities available elsewhere that might aid collaboration within your team. Thirdly, it provides an overview of how to communicate constructively using electronic media. Fourthly, it builds upon the Working at a distance *Resource Sheet*.

2 Introduction

The course website is your starting point for your work on M253. In addition to the course materials, the front page of the website links to two electronic collaboration tools. These tools will enable you to communicate and collaborate with the other members of your team on the teamwork activities that comprise M253. The electronic collaboration tools provided are:

- A forum. Forums enable you to exchange messages, and engage in discussion and debate with the other members of your team. Forums can be used in many different ways within a website to support team communication and foster collaboration. Members of the team can post contributions to a named forum under a particular named topic (or thread). Other members of the team can reply to forum messages, thereby extending the threaded discussion, or they can start a new thread. All entries are date-stamped and recorded in one central place – the forum.
- A wiki. Wikis enable the team to create shared web pages and to discuss their content. A wiki is a set of web pages that you can add to, or edit, online. The wiki starts off as a single page called the front page. You can create new pages and link to them from the page you are editing to form a hierarchy of pages. Team members can use the wiki to create shared documents, and to discuss their content in a way that allows all the relevant information and discussion about such documents to be kept together in an easily accessible form.

On M253, each team will have their own forum and wiki which will not be accessible to other teams. Your tutor will also have access to your team forum and wiki. They will monitor your progress and activity in these areas, and they may post messages to your forum if they feel that this is necessary.

2.1 Why use a forum and a wiki?

Why do you need a team forum and a wiki? Why not use other communication technologies such as email? In brief, you need a shared workspace in which you can: communicate and collaborate with other team members, make decisions, hold meetings, and share documents. In other words, your team forum and wiki provide, for a distributed team, the electronic equivalent of a shared office or project meeting room.

There may be times when you feel the need to communicate with the rest of your team by other means, in addition to messages posted to a forum. For example, a quick telephone call, an online chat, an email message exchange, or even a couple of text messages may provide an even more effective means of reaching decisions amongst two or more members of the team than a discussion in the main team forum. However, if you do use other electronic media to communicate within your team (particularly if some of your team may not be aware of the discussions taking place outside the team forum) then you should post a summary of the discussion, and the decisions that you have made, to the team forum.

You can think of this summary posting as representing a set of minutes for the meeting that took place electronically. Why is this summary posting important? There are at least three reasons. Firstly, it keeps everyone in the team informed of what is going on. Secondly, it enables your tutor to monitor your progress. Thirdly, the team conference can act as a repository and archive (for messages and documents in the widest sense) of your team's progress towards meeting the tasks that your team has been set. If the forum and wiki are to be a complete record of the activities of the team then you must log the interactions that take place outside your shared workspace. You need to ensure that an accurate record is made at the time, which can be revisited at a later date when further discussion or reflection is needed. You cannot rely on your individual or collective memory!

How your team uses its allocated forum and wiki is to a large extent up to the team. In the next two sections we offer some suggestions of ways in which your team might effectively use these tools.

3 Using forums

You can gain access to your team forum by clicking on the 'Team forum' link on the home page of the M253 course website. The forum home page displays information about the discussion topics which have been posted to the forum. These are listed with the most active discussion topics at the top of the page and the older topics at the bottom of the page, or on subsequent pages. Clicking on any of the discussion headings in the forum will uncover the series of messages and replies for that topic. Any team member can add a message to an existing discussion or they can add a new discussion topic to the forum.

Forum discussions are built up from individual team members messages. Whether they are starting a new discussion topic, or responding to a message within an existing discussion topic, the features associated with a message are the same.

Messages can contain standard text formatting and headings, as provided via the text editing toolbar within the message editor. They may contain HTML. Messages may have up to three attachments, each of which may be up to 500 KB in size. Messages can be sent to the forum immediately or saved as a draft. Draft messages appear only to their author within a discussion topic until they are posted to the team forum.

Further information on how to use the forum that has been provided for your use on M253 is contained in a *Forum Users Guide*, which is available on the M253 course website.

3.1 Using message threads

When reading several messages on the same topic it is convenient if you can read them in the order in which they were posted, so that you can follow how the discussion is developing. Messages that have the same subject (the words that appear on the subject line of the message, not the content of the message) are known as a message thread. Different systems have different ways of presenting threads. Some, such as the forum that you will be using, use indentation to show the order in which messages were replied to in a thread; others put a number in the subject line of the message.

Sometimes, a discussion can move off the topic of the original thread, or several new ideas can be sparked off in the course of a discussion. If this happens, start a new message thread with a new subject line that is more descriptive of the content of the message. If you do not do this it can be hard to find messages of interest again, since the subject line may have little or nothing to do with the content of the message. Or, if discussion in the thread indicates that the original issue was much more complex than was first thought, it may be helpful to start separate threads for each distinct issue.

Giving messages meaningful, unambiguous, subject lines can greatly enhance your ability to find your way through the many postings that appear in busy forums. For example, the message title 'Chat meeting tomorrow' is a good title in that it is concise, but it only makes sense if you read the posting on the day that it was posted. Depending upon when you read the message 'tomorrow' could mean today, or even yesterday! So, being concise and precise helps.

Regarding the conciseness of the title, short titles are better than long titles because the subject line can be truncated within the forum interface so that the rest of the title does not show up. For example, 'Let's have a discussion about how we're going to submit the team documentation' is likely to be truncated because it is too long. So, make the subject line short, and consider turning titles around by putting the important words first: 'Chat meeting on Friday 14th to discuss team documentation?' is still long, but says everything. 'Availability Friday 14th for chat meeting' is short and has almost all the pertinent details except for the topic of the discussion.

3.2 What to use forums for

Your forum is best suited to discussion and debate. A team member begins a new thread with an initial posting that outlines an issue for discussion. Other team members join in the discussion and hopefully arrive at a mutually agreed conclusion. There is no reason why you can't have several topics under discussion at any one time, since this is easily managed through your forum home page.

Decision-making in forums is also possible; however it is best managed by setting time limits on the initial discussion and deadlines by which decisions should be taken. These so-called asynchronous meetings (asynchronous because the participants do not all have to be 'present' at the same time) can be an effective way of managing progress. Without imposing time limits for responses, decision-making can become a protracted affair, which slows progress.

The third area of team business that you may wish to manage in the forum is the compilation of the team report that you have to prepare for each TMA and the ECA. Although you can post drafts of documents as attachments to messages and then comment on them in the accompanying message thread, you might find that this aspect of the team's working is best managed in the team wiki (see below).

4 Using wikis

One of the problems with using forums as the main, if not the only, vehicle for communication and collaboration in virtual teams is the difficulty encountered in not being able to create shared documents. Consider the situation where one team member writes (a part of) a document and circulates it to the rest of the team. They may then get back multiple modifications to pull together into an updated version, which itself may then be re-circulated and re-modified more than once. The version control problems this causes take up far more time and energy than is justifiable. Your team wiki is intended to meet this need, since it provides somewhere that teams can develop shared documents together.

You can gain access to your team wiki by clicking on the 'Team Wiki' link on the home page of the M253 course website. On the home page of the wiki you will be able to see the underlying structure that we have created for you: there are links to several sub-

pages within which we would suggest that you create the collaborative documents related to the particular TMA that you are currently working on.

We have created a General Issues page where you could keep details of things like your team rules, and team roles and responsibilities, and we have set up a very basic set of sub-pages for this. On the General Issues page you will see that there are links to sub-pages for your Team Rules, Team Roles and Responsibilities, your Schedule and Contact Details. You could also create sub-pages for anything else that you felt would be useful for your team members to have in one easily accessible place. Finally, we have created a 'Sandbox', which is a page on the wiki that you can use for experiments and to try things out while you get used to working with a wiki.

Navigation between the wiki and the forum is straightforward as you simply follow the links provided. On the home page of your team wiki you will find a link which takes you to your team discussion forum. Likewise, on the home page of your team forum there is a link to your team wiki. By using the 'breadcrumb trail' link at the top of your team wiki page you can return to the top-level team wiki page and from there, by clicking on the Back to Team Forum link, you will be taken back to the home page of your team forum.

4.1 Using the wiki

One of the major drawbacks with using wiki pages, as compared to using a forum, is that contributions to the page do not get the author's identity, or the date of the contribution, automatically attached to them. However, there is evidence of who did what, when, in each wiki page's history, which can be found by using the History tab at the top of the page, but it is not very easy to follow given the potentially large number of changes made to a page over time. You will need to develop your own rules for how you are going to handle this issue, as it is clearly important to know who has contributed what on each page. A simple convention where you enclose your contribution in angle brackets containing your name or initial is one possibility, but you may well have better ideas. You may also decide that it would be useful to keep your own simplified history of how the content of the page has developed over time.

Although you can discuss what you want to put in any particular wiki page using the forum, you might find it easier to use the wiki comments facility for commenting on the actual contents of each wiki page more directly. Comments on the content are identified with the author and date if you use the wiki comments facility.

The way in which the wiki is implemented means that only one person can edit a section of a wiki page at any given moment in time – only asynchronous working is possible. The system will lock the section automatically and not allow anyone else to access it until the current editor has signed off and released that section of the page. If the current editor fails to sign off then this will cause problems for the rest of the team who share the wiki, so you need to think about how you are going to manage your access. We suggest, if you have any significant amount of text to add to a page, that you prepare your material offline and then cut-and-paste it into the wiki page in a single access, rather than staying online whilst you are thinking about what to add.

When you have added content to a wiki page, the system lets you preview what you have done before you save it permanently. What you must remember, however, is that you do need to go back and save it after previewing it, otherwise the system will just lose all your work, which can be very frustrating (possibly another reason for preparing any large entries offline)!

Although one of the features of a wiki is that you can delete work entered by other people, we would discourage you from doing so in the context of M253. If you think things need to be changed you can leave a comment to this effect, with your reasons for suggesting the change, and let the original writer/owner of that content decide how to do the modifications. Possibly an agreed version of the content could be moved to a separate, final version page when the rest of the team has had their say. As a team you might want to think about setting up timed cut-off dates for each section of a document, so that people have a chance to make suggestions, but there is only a fixed interval during which this can be done before the section is finalised.

The collaborative work that you submit for each TMA and the ECA will probably need to be cut-and-pasted from the wiki page(s) and presented as a single Word document. If you need to provide evidence of your individual contributions to the content of, or to provide evidence of comments made on, a page you can always cut and paste from the wiki's History feature, since every entry or change that has been made is logged somewhere in the history pages.

Further information on how to use the wiki that has been provided for your use on M253 is contained in a *Wiki Users Guide*, which is available on the M253 course website.

5 Other collaboration tools

On M253, you have been provided with a forum for general communication and a wiki for the development of documents. In addition to these tools, your team is free to discuss and reach agreement upon other tools that you might like to use to help the team work together effectively. Having said that, there are two key points that you need to bear in mind before considering, or while using, other communication tools. Firstly, a summary of what you discuss, agree, and create must be relayed back to the forum or wiki so that everyone in the team and your tutor, knows, or is able to find out, what is going on (as discussed in Subsection 2.1 of this *Resource Sheet*). The forum and wiki, therefore, become the central repository for the team. Secondly, if your team is going to take some responsibility for identifying additional modes of communication and collaboration that the team can use, you must obtain team agreement about the use of such a tool. In this section we will introduce some of the other tools that you might like to try using, to help you to work together.

5.1 Instant messaging

In contrast to forums and email, which are both forms of asynchronous electronic communication, instant messaging (otherwise known as online chat) is a form of synchronous communication. Therefore, you need to be online and using the same instant messaging system as the rest of your team if you wish to take part in instant messaging discussions.

If your team does decide to hold an instant messaging session then a key decision that you will have to make is which instant messaging system to use, since they are not all compatible with one another. Some members of the team may already use an instant messaging system – this may influence your decision since they will have experience of their use. Two of the most popular systems are Yahoo! Messenger and Windows Live/MSN Messenger. Other options include two systems that have been developed by the Open University and are operated on an experimental basis: BuddySpace and MSG.

With most systems, you will have to install the relevant instant messaging software and there will be some sort of registration procedure. Once registered, you will be able to initiate instant messaging sessions with other users and be able to accept invitations to join instant messaging discussions. You can accept or decline invitations to join discussions – if you accept the invitation then your name will be added to the list of participants. People can choose to leave the discussion when they wish, take breaks from participating in the session, and read what has been said before they were invited to join the discussion.

Instant messaging discussions are typically textual, although with some systems you can format your text, paste in images and even (if you have the appropriate equipment) include voice messages. You can often share files with instant messaging systems. This is one way of initiating a discussion about a draft of a document that the team is working on.

The person who initiated an instant messaging session can usually save a transcript of the session in a file. This can be particularly valuable if some members of the team are unable to participate in the session, since they can read the transcript at a later date. How you do this will depend upon the system that you are using, but usually, the

person who begins the instant messaging session has to decide to record the session when it is set up, not when it is closed down. Alternatively, you can cut and paste excerpts from instant messaging discussions into a document or your project log for your records.

In some ways, meetings conducted by instant messaging are more flexible than faceto-face meetings. People who arrive late can catch up, you can take breaks from the meeting, and a transcript of what was said can be generated automatically. About the only things that instant messaging cannot do for you is make the decisions and write the minutes of the meeting – these still have to be done by the participants in the meeting!

5.2 Audio conferences

For many people, a more natural way of communicating than synchronous text chat is synchronous voice communication – the telephone being the classic example. Recently, the possibility of making free (or cheap) telephone calls over the internet has become a reality, with Skype being one of the most popular systems in use. Many of these systems enable you to hold conference calls, which are telephone (or internet) calls that involve more than two participants.

In order to use internet telephony (or VOIP – Voice Over IP as it is sometimes called), you will need a microphone and loudspeakers for your computer and a reasonably fast internet connection. In the course team's experience, the microphone and loudspeakers that are often built into laptop computers are adequate, but audio feedback can be reduced, and sound quality improved, by using a headset with attached microphone (this doesn't need to be highly technical – a relatively inexpensive headset will suffice).

5.3 Video conferences

A step beyond internet telephony is videoconferencing, which requires additional equipment in the form of a webcam (a web camera). Again, this does not need to be a very expensive model and some laptops are equipped with a webcam for this purpose. Skype offers videoconferencing and the Open University has developed a system called FlashMeeting. Like MSG, FlashMeeting runs in a web browser so there is no software to install. Unlike some systems, FlashMeeting is half-duplex, which means that people have to take it in turns to talk (a duplex system would allow more than one person to talk at the same time). Half-duplex communication works very well in large meetings – it imposes discipline in the meeting and everyone can take their turn in contributing to the discussion. Links to relevant websites for these systems are available in the Further resources section of this *Resource Sheet*.

All of the systems that we have described in this section facilitate synchronous communication between two or more participants. As such, these systems are best suited to supporting decision-making rather than discussion, debate and brainstorming, which could be carried out in the forum. Examples of decisions that you might want to make in a synchronous meeting include allocating tasks or team roles to team members, or agreeing a schedule for work to be done.

6 Good practice when communicating electronically

Much has been written, and many guidelines have been produced, on the good practices that should be adopted when communicating electronically in forums and by email. These guidelines go by the term 'netiquette', which is a contraction of the phrase 'network etiquette'. This is a generic term for the conventions of communication that have been adopted in communities that communicate electronically, for example, by email, on forums and on wikis.

The Open University has the following summary advice on netiquette.

- Remember that you are talking to real people.
- Try to keep your messages short.
- Give your messages a descriptive Subject line.
- Summarise messages when replying to them.
- Check with the sender before quoting from private email.
- Credit other people's work.
- Signal your emotions in messages.
- Avoid writing all in CAPITALS.
- Send your messages to the right place.

(Open University 2007)

More detailed advice is contained in an excellent paper by Ben Plumpton – 'How students can make conferencing work' (Plumpton 2002). While Plumpton has little to say specifically about team working and project-based working, he does set out a vision for what an effective forum should be like (see Section 4 of the printed paper). This vision is just what a good team forum should be like: everyone participates, the forum is supportive, everyone takes initiative and acts as the facilitator sometimes, everyone writes carefully, and people trust each other. The rest of the paper goes on to give much practical and useful advice on how to achieve this vision of an effective forum. Other very good sources of further advice on netiquette can be found in the Further resources section below.

Finally, it is worth remembering the following piece of advice:

When you are interacting with other people online, you don't have the extra benefits of body language or voice intonations to help you get your point across – most people will know you only by what you write and how well you write it.

(Open University 2007)

7 Summary

This *Resource Sheet* has been written as a brief reference and as a reminder of some of the issues surrounding communicating using forums and wikis. Section 2 described the way in which your team collaboration space has been set up. Sections 3 and 4 provided an overview of some of the major features of forums and wikis. (Detailed explanations of how to use these features are available in the forum and wiki users guides on the M253 course website.) Instant messaging, audio- and videoconferencing were discussed in Section 5. Finally, Section 6 gave some information and pointers to other good references on how to communicate effectively online – so-called netiquette.

8 Further resources

The Forum Users Guide and Wiki Users Guide are available online on the M253 course website.

The Open University Computing Guide [online] <u>http://www.open.ac.uk/computingguide/</u>

The Computing Guide contains general information on many software applications that are used at the Open University. The Codes of Conduct pages available at http://www.open.ac.uk/computingguide/codes/s1.html summarise the conditions under which you can use OU computing systems, and a code of conduct to which you must adhere in your forum and wiki postings. This section of the Computing Guide also contains a very useful list of 'do's and don'ts' when using online communication systems.

The Open University PC4Study site [online] http://www.open.ac.uk/pc4study/

Ben Plumpton's paper on 'How students can make conferencing work' was used as a basis for the Online forums section (select the 'Online forums link' from the 'Communicating' menu towards the bottom of the page).

Instant messaging systems include:

Yahoo! Messenger at: http://messenger.yahoo.com

Windows Live/MSN Messenger at: http://messenger.msn.co.uk/

BuddySpace at: http://kmi.open.ac.uk/projects/buddyspace/

MSG at: http://kmi.open.ac.uk/technologies/msg/

Audio- and videoconferencing systems include:

Skype at: http://www.skype.com/

FlashMeeting at: <u>http://flashmeeting.open.ac.uk/</u>

9 References

Open University *Netiquette* [online], <u>http://www.open.ac.uk/computingguide/codes/netiquette.html</u> (Accessed 16 November 2007).

Plumpton, B. (2002) How students can make conferencing work [online],

<u>http://www.open.ac.uk/pc4study/documents/how-students-can-make-conferencing-work-scr.pdf</u> (Accessed 16 November 2007).