ENLIVEN
ENHANCED LEARNING AND
TEACHING IN INTERNATIONAL
VIRTUAL ENVIRONMENTS

Collaborative Tools

28.5.2022.

ENLIVEN

ENLIVEN

COLLABORATIVE TOOLS

General explanation of Collaborative Tools

- Prerequisites
- Video meetings
- Chat
- Wiki
- Notebook
- File sharing

Advanced usage of Collaborative Tools

- Using dedicated apps
- Printing to OneNote
- Sharing files
- Uploading to Stream
- Live events
- Math in OneNote

Practical examples of Office 365 Collaborative Tools

- Creating a team
- Chat
- OneNote Class notebook
- Managing contents

Check your knowledge

- Quizz I
- Quizz II
- Quizz III
- Quizz IV

Summary

"Collaborative tools" covers the topic from the perspective of Microsoft Teams and related apps in the Microsoft Office 365 ecosystem. The aim of this presentation is to define main traits and uses of collaborative tools, provide explanations of their purpose and several practical demonstrations.
The contents of this document covers the basic uses of collaborative tools, as well as some advanced topics. Where appropriate, official training videos have been linked to the document. Our own practical examples have been referenced.

I Collaborative Tools

Collaborative tools help people work together toward a common goal. Any software that helps work with others is a collaborative tool. Besides specialized apps, many other more general apps have features which qualify them as collaborative tools. For example, Microsoft Office apps Word and Excel support concurrent editing of documents, which makes them collaborative tools.
A team collaboration app combines several features into a versatile tool that brings team members and information together in one place.

Let us explore common types of collaborative tools:

• Video meetings, to bridge the physical gap between participants
• Chat, which supports instant messages, reactions, and instant file sharing
• Wikis, useful for structuring and disseminating mostly static information
• Notebooks, used for interactive presentations and note taking
• File sharing, which enables learning material repositories and collection of student work
• Video services, to store and publish recordings of classes and meetings
• Team collaboration, to help workgroups and teams work together remotely

In Microsoft Office 365, these features are provided by Teams, OneDrive, OneNote, Stream and several other related apps.

In a school environment, meetings are usually scheduled by a school authority, according to the class timetable. Additional meetings may be scheduled for office hours or between participants in school projects.

Watch video Tips for Microsoft Teams meetings

1.1. Prerequisites

There are several prerequisites for successful online collaboration:

- A well-managed user database ensures that every user is known by their real name, department, position, class and/or office location. In contrast, users on a system with public access can have cryptic, unrecognizable, or even offensive account handles.
- The chosen software platform should be universally accessible via Web applications, native desktop and mobile applications, and supported on all major operating systems.
- Productivity is important. The tools should be simple to use and learning curve must not be steep. Also, a well-established platform will be supported by many online resources, such as documentation and tutorials.
- The number of times users must type in their passwords is important. Web applications typically require a sign-in every time they are used, while native apps do not. Having to remember too many different accounts and passwords can be a significant hindrance for a platform. Also, help desk may be overwhelmed with requests from users for password recovery.
- Total cost of ownership. It depends on direct costs, such as subscription fees, and on indirect costs such as administration, training, and maintenance costs.

1.2. Video meetings

Video meetings are the closest to in person meetings. The basic function of video meeting tools, including Teams, is to bring a group of people together and assist their work toward a common goal. In a well executed video meeting the participants are not distracted by technology (video or audio artifacts, latency, interruptions etc.) On the contrary, technology aims to emulate as much of physical presence as possible. For example, instead of gesturing towards an attendee, we send them a chat message. Instead of raising a hand, we click on the "raise hand" icon. Instead of handing a document to someone, we share our screen or send them the file, and so on.

Video meetings can be scheduled in advance or initiated on the spot. In the first case, the meeting will appear in the organizer's calendar and in the calendars of all invited participants. In the latter case, the meeting is initiated as a video or voice call between two parties, and new participants can be added during the meeting.

Joining a meeting in Teams can be accomplished in several ways. You can click "Join" on the event in your calendar, or you can click the link in an email invite. If the meeting is within your organization, you can log in with your username and password. If not, then you are a guest and must type in your name before joining.

`Watch video` How to join a Teams meeting

`Watch video` How to share your screen in a Microsoft Teams meeting

Besides webcam video, Teams supports sharing the entire desktop, a selected application window, a PowerPoint slideshow or Whiteboard. This feature is extensively used for presentations during lectures. Depending on the meeting options, other participants can also share their content. In a class meeting, the teacher must manually allow each participant to share their content, which is useful for student presentations, such as reports, exercises, and homework. During the presentation, other participants may use the Raise hand reaction to request attention. Breakout rooms are used to partition the meeting into smaller groups, which is particularly useful for when students need to solve exercises.

`Watch video` Tips for Microsoft Teams meetings

1.3. Chat

Chat is meant for sending and receiving text messages and reactions to messages. Emoticons are used to convey emotion and further specify the tone of messages. Quick reactions (e.g., exclamation mark, smile, applause etc.) provide a quick and consistent way of expressing one's feelings without sending a message. They can also be used as a confirmation that a message was received and understood.
Additionally, images, files and other types of content can also be exchanged. During class, chat is the preferred way of asking questions, since a text message is not intrusive, the question remains in the chat log for all participants to see, and the speaker can answer it as they see fit.
Teachers can provide additional written information in the chat during a lecture, such as textbook references, homework assignments, hyperlinks to additional resources, etc.

`Watch video` Get started with Chat (microsoft.com)

1.4. Wiki

A Wiki is a collaboratively maintained collection of web pages which maintains a body of knowledge. Wikipedia is the most popular Wiki today, but Wikis exist in other places too. Wiki pages have a simple structure, consisting of paragraphs of text divided into sections. Besides text, a Wiki can contain lists, tables, images, and hyperlinks. Basic text formatting tools are also available.
A convenient feature of a Wiki is that it is easy to create and search content on, thanks to the automatically generated table of contents.
In a school environment, teachers can add a Wiki to Teams to create and disseminate teaching materials. Within the collaborative learning paradigm, students can also engage in contributing content to the Wiki.

`Read` Add and use a Wiki tab in Teams (microsoft.com)

1.5. Notebook

Notebooks in OneNote are digital drawing and writing surfaces. Their contents can be shared with meeting participants and are updated in near real time. Thus, a teacher can simply create content in their notebook, while students watch it simultaneously on their devices. Notebook contents can be organized, labeled, and categorized.

Notebooks support typed text, text styling, images and multimedia, hyperlinks, handwriting and drawing. Advanced usage scenarios should also be available: embedded videos and various interactive actions, such as ad-hoc calculation, graphics etc. OneNote supports PDF content; thus, the teacher can include parts of a textbook and write annotations and comments on it during class.

Teams supports Class notebooks, which are a great tool for note taking during classes, and for material dissemination, quizzes, homework collection and grading.

A pen-enabled touchscreen or a graphics tablet greatly enhances the experience when working with notebooks.

[Watch video] Organize your thoughts with OneNote

1.6. File sharing

File sharing is essential in a modern classroom. Classroom notes, homework, exercises, learning materials, experimental data and other documents are regularly shared between teachers and students. There are several requirements that must be met when sharing files in class:

- All materials pertinent to a lecture must be available to all participants
- Access to the materials should be simple and straightforward
- Files should only be accessible to the intended group

Ad-hoc file sharing is possible via messages in meetings and chat. However, to build a comprehensive and organized library of learning materials, files should be uploaded to a cloud storage service, such as OneDrive, Google Drive, DropBox, etc. Distance learning platforms usually have built-in storage solutions.

For example, Microsoft Teams uses OneDrive technology. In Teams, files can be shared either in chat, or directly in the Files tab in each channel. To make the file accessible to the audience, the author must obtain a link to the file. The link can then be sent by email, or shared in chat, Wiki or OneNote.

[Watch video] Upload and share files (microsoft.com)

II Advanced usage of Collaborative Tools

2.1. Using dedicated apps

Use dedicated apps instead of Web apps for better experience and productivity.

Download Microsoft Teams

In the OneNote Web app, click the "Open in Desktop App" button to open the current notebook in OneNote for desktop. The desktop app provides a smooth user interface with more features, better support for hand drawing, and support for printing directly to OneNote notebooks.
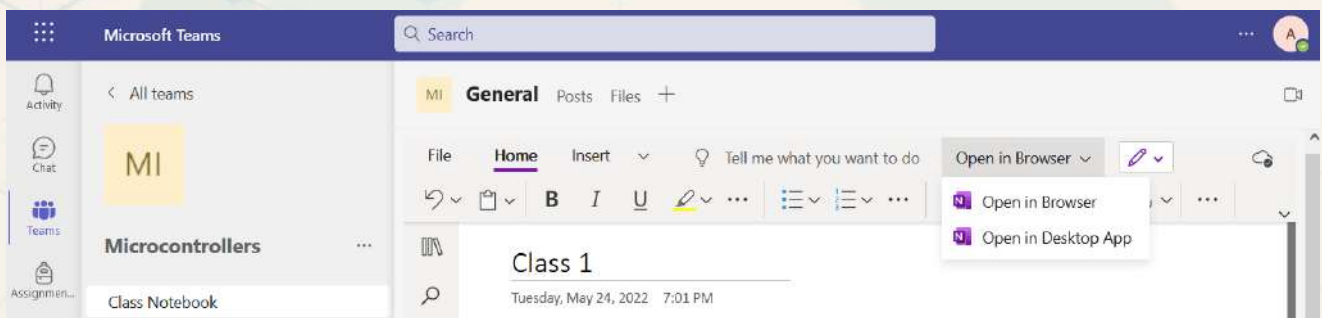
Download and install OneNote for mobile devices. Upon login, all your notebooks will be available on the mobile device.

2.2. Printing to OneNote

Any application with printing support can print to OneNote for desktop, making the printout available as notebook content. By using drawing tools, you can mark and annotate the printout, thus making OneNote a convenient teaching tool. For example, pages from a PDF textbook can be printed to a class notebook in OneNote and used by the teacher for presentation during class.

Watch video Print to OneNote

2.3. Sharing files

When sharing files with others, it is important to set up a consistent naming scheme so that content can be inferred from the name. The students should be presented with clearly stated requirements for the files they upload, for example:

* Clearly state your name and file contents in the file name, e.g., "homework-alexjones.zip".
* If the materials consist of several files, it is convenient to group them into a ZIP archive
* Avoid unnecessary multimedia to keep file sizes within reasonable limits.

Teachers should name their files according to lecture naming conventions, e.g., "lecture01-2022-04-16".
It is convenient to create a separate folder for each lecture and upload all corresponding files in it.
If the naming scheme contains dates, choose the "yyyy-mm-dd" format, which displays consistently and enables correct sorting.

Shared files are stored either in your personal OneDrive or in a file library within Teams. To provide access to the files, you will need to create a hyperlink that points to it. When creating a link, one of several access levels must be chosen:

* Anyone with the link can access the file (not secure)
* People in your organization (accessible to all registered users)
* People with existing access (best when the file is shared with members of a team in Teams)
* Specific people (creates access rules for the users you specify)

Watch video Share your documents (microsoft.com)

2.4. Uploading meeting recordings to Stream

Recorded meetings produce video files, stored temporarily in Teams, which can be published to Microsoft Stream. The teacher should take the following steps:

* Download meeting recordings from Teams to the computer
* Rename the files so that the names reflect their contents and date (e.g., "Lecture 01 – 2022.02.15")
* Upload the files to a Stream channel, providing additional information, such as short description and possibly subtitles
* Share the link to the files with the students, e.g., in chat or in lecture notes in OneNote.

Watch video Upload a video with Microsoft Stream (Classic) - Microsoft Stream

2.5. Live events

Microsoft Teams supports Live events – scheduled video meets aimed at large audiences, where multiple people are presenting, and all the other participants are attending. During Live events, participants cannot share screens and use their microphones. The only means of communication is chat messages.
Live events support multiple concurrent video sources - cameras, shared screens, and PowerPoint presentations. They differ from ordinary meets in that live events must be controlled by a producer.

Watch video How to produce a live event in Microsoft Teams

Read What are Microsoft Teams live events? - Microsoft Teams | Microsoft Docs

2.6. Math content in OneNote notebooks

OneNote can recognize handwritten mathematical notation and solve certain types of problems while providing detailed step by step instructions.

Watch video Making Math Accessible with Math Assistant in OneNote

III Practical examples of Office 365 Collaborative Tools

3.1. Creating a team

Alex is a teacher. He creates a team for his course and adds students to the team

Watch video Creating a team in Microsoft Teams

3.2. Chat

Alex and Bob are in a chat. They exchange text messages at first. Bob sends a quick reaction – emoticon – as a reply to a message from Alex. Alex shares a file with Bob, which he downloads to his computer.

Watch video Chat in Microsoft Teams

3.3. OneNote Class notebook

Teacher creates a class notebook using Class Notebook tools in Teams. (S)he then adds sections and pages, which provide structure for the learning materials. The teacher proceeds to enter text, images and hyperlinks to OneNote.

Watch video OneNote Class notebook in Microsoft Teams

Managing contents in OneNote

Teacher publishes lecture notes in OneNote within Teams. A separate page is created for each lecture. New pages are created for any additional materials. These pages are grouped as subpages under the main page. Materials published by the teacher cannot be modified by the students.
Each student has their own section in OneNote, where they can take notes. The teacher can create a page with a quiz or homework assignment and distribute it so that every student receives their own copy. The students then solve the assignments.
The teacher can access all students' pages in OneNote and review the answers.

Watch video Managing content in OneNote Class Notebook

IV Quizzes

Check your knowledge

Visit the quizzes below:

- General topics on collaborative tools related to Microsoft Teams

- Chat in Microsoft Teams

- Wiki, OneNote notebooks and File sharing in Microsoft Teams

- Advanced use of Tools in Microsoft Teams

ENLIVEN