

Compendium of Augmented Blended Teaching & Learning for Open Pedagogic Tools

Blended Learning Tool Evaluation – Microsoft Teams

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Report Overview

This document describes Microsoft Teams as a tool to support blended learning. Following testing and evaluation, it discusses the functionalities and how the tool supports educators in their professional activities, namely:

- Professional Engagement
- Digital Resources
- Teaching & Learning
- Assessment
- Empowerment of Learners
- Facilitating Learners' Digital Competence



1. Introduction

Microsoft Teams is a persistent chat-based app through a collaboration platform for team organization and conversation from anywhere. Teams is a virtual space that teachers need for real-time file sharing, web meetings, and business networking. Having a telecommunication team space is essential for effective business decisions. Indeed, Teams is an app for the management and organization of work teams—all in one place, all in the open, all accessible to everyone.

Best practices:

- **Chats personalization:** When using Microsoft Teams it is not uncommon to have multiple different chats simultaneously. For this reason, the app allows you to title chat avoiding the problem.
- **E-mails integration:** Today, e-mail is considered the primary communication means. For this reason, Microsoft Teams made it easy to send an e-mail to a team chat, creating a custom e-mail address usable instantly via Microsoft Outlook, for example, to send communication or Word documents.
- **Docs archiving and sharing:** The platform can also be used for file storage and team collaboration, accessing within chats.
- **Continuous connection:** Users can access the Microsoft chat app anytime from anywhere and any preferred smart device, including iPhone, iPad, Android, Windows Phone. At the same time, the full range of additional features is only accessed from a desktop system.
- **Guest Accessibility:** Microsoft Teams is not an exclusive, members-only club. User can expand their chats, allowing inviting anyone to join the conversation also through an Outlook account.
- **Tasks Management:** This feature helps activities and classes planning, organization, and management.
- **User assistance:** This is the interface to the Teams' help center. It is a web robot that helps users find solutions to their questions.
- **Message saving:** This feature allows you to save a particular message for future reference.

Main actions:

- **Teams** – easy and quickly team creation or research for meetings, communication, and file sharing.
- **Meetings** – calendar for meeting scheduling synchronized with Outlook.
- **Calls** - Channel conversations, meetings, and chats to always be connected, calling anyone from Teams, even if they're not using Teams.
- **Activity** - Ask questions, keep track of important information and content, search for specific items or people, take quick actions, and launch apps.

Due to the pandemic situation, higher education institutions get started with Microsoft Teams for remote learning in Office 365 Education. Educators benefitted from Microsoft Teams for Education as a digital classroom hub. One of the main objectives of educators is to get the most out of Teams enriching students' learning experiences by creating teams for classes, research, study, and projects groups.

2. Testing and evaluation of the tool

UNIVPM widely used Microsoft Teams during the pandemic. It has been tested and used as a tool for:



- communication between educators and/or between students in addition to the e-mail,
- online lessons,
- exercise and tutoring activities,
- exams (through audio and video functionalities),
- internal meetings between educators and/or students,
- external meetings between project partners.

The testing activity was particularly useful in assessing the user-friendly nature of the tool, allowing it to be used even without consulting a guide. The exclusive use of Teams during the pandemic allowed for multiple features to be experimented with and tested, from creating study groups to individual use, from screen sharing to recording, from performing digital lessons to exercises execution. For each Microsoft Teams feature both limits and expertise areas are shown in Table 1.

Table 1 - Microsoft Teams features

Area	Feature	Limits
Teams	No. of teams you can create	250
	No. of teams you can join	1000
	No. of team members	10000
	No. of team owners	100
	No. of team channels	200
	No. of private team channels	30
	No. of members in a private channel	250
Meetings	No. of members	350
	Size of shareable Power Point file	2 GB
Chats	No. of members	250
	No. of members in a video or audio chat call	20
	No. of attachments	10

The evaluation resulting from the testing activity is generally very positive. However, as with any software tool, it is possible to make a list of the main advantages and limitations of Microsoft Teams app after the testing activity in the field of education:

Advantages

- User-friendly and easy to use
- Client for several PC (Windows, Mac, Linux)
- Classmates' interaction in a familiar environment
- Assignments and work efficiently uploading in one place
- User help and support
- Students' collaborations on projects and homework
- Safe and secure working environment and file storage

Limitations

- Very successful only in a Microsoft operating environment
- Limit the number of students viewable on the screen during e-learning and exams
- Classes creation is not fully automated process for educators



3. Functionalities supporting blended learning

The nature of Teams encourages the development of educators' professional activities and qualities such as integrity, respect, collaboration, and communication. It also promotes the sharing of best practices, knowledge improvement, and digital skills detection.

Teams' functionalities to support educators' activities are described organized under the following sub-headings:

- **Professional Engagement**
- **Digital Resources**
- **Teaching & Learning**
- **Assessment**
- **Empowerment of Learners**
- **Learners' Digital Competence**

3.1 Supporting Professional Engagement

Microsoft Teams supports professional Engagement involved in the activities of educators and students by bringing together the best of Office 365 in a single workspace. Microsoft Teams provides solutions for a customized, user-friendly, and integrated learning experience. Here several features of Teams supporting professional engagement are described.

Educators and learners can apply their existing knowledge and talents and share them. Microsoft Teams platform encourages educators and learners to apply and share their existing knowledge, ideas, and expertise. For example, educators can create their classes' knowledge space with SharePoint sites, organize related documents, and discover news and classes activities.

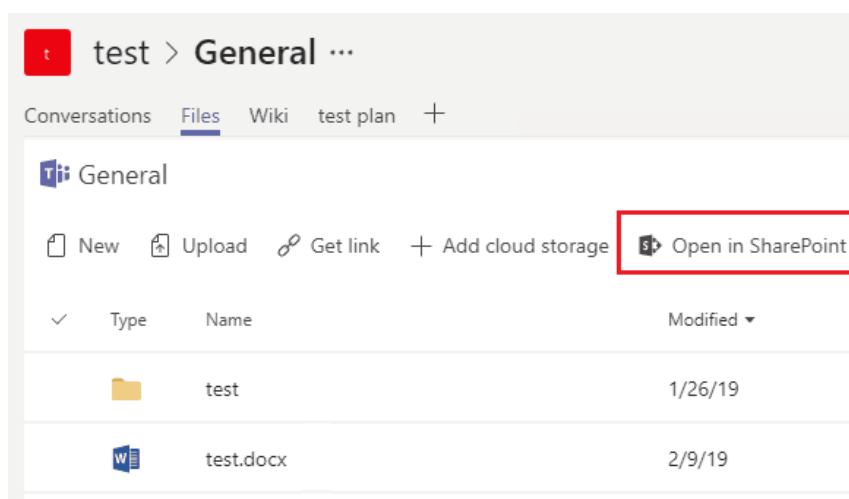




Figure 1 - Share Point and Microsoft Teams integration as knowledge space

During digital real-time classes, educators can switch from sharing slides to sharing videos to show a web page that they want the students to see to reinforce learning processes. In this way, students remain engaged by the ongoing and effective change like the content shared.

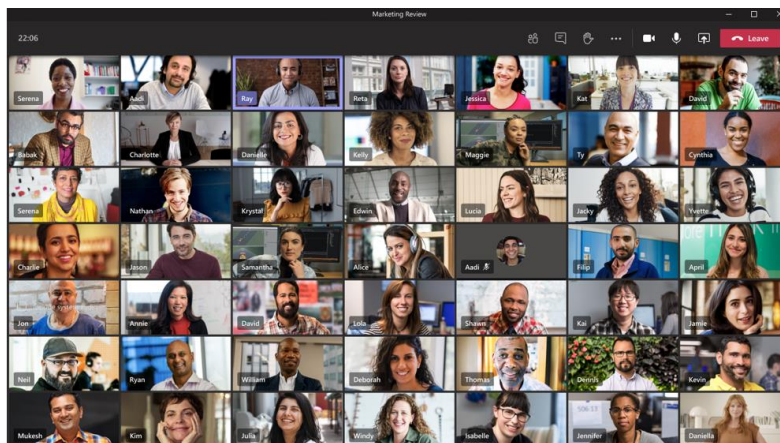


Figure 2 - Example of virtual classes on Microsoft Teams

Professional educator engagement has always been promoted by monitoring students, such as visual and oral supervision. Today, Microsoft Teams app allows educators to verify if the student is working efficiently in real-time during classes and assignments, for example, by using the Insights App. This makes it easy for educators to start a conversation with students to see if they need assistance while reminding them to stay on task.

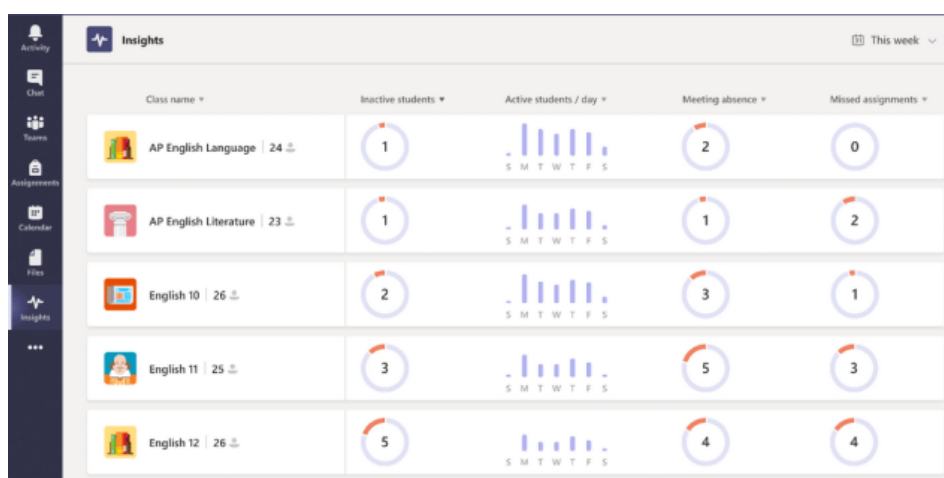


Figure 3 – Insights app for students monitoring

Strategic use of the chat tool in Teams could be a great way to keep students engaged by asking them to write their questions or reactions during class.

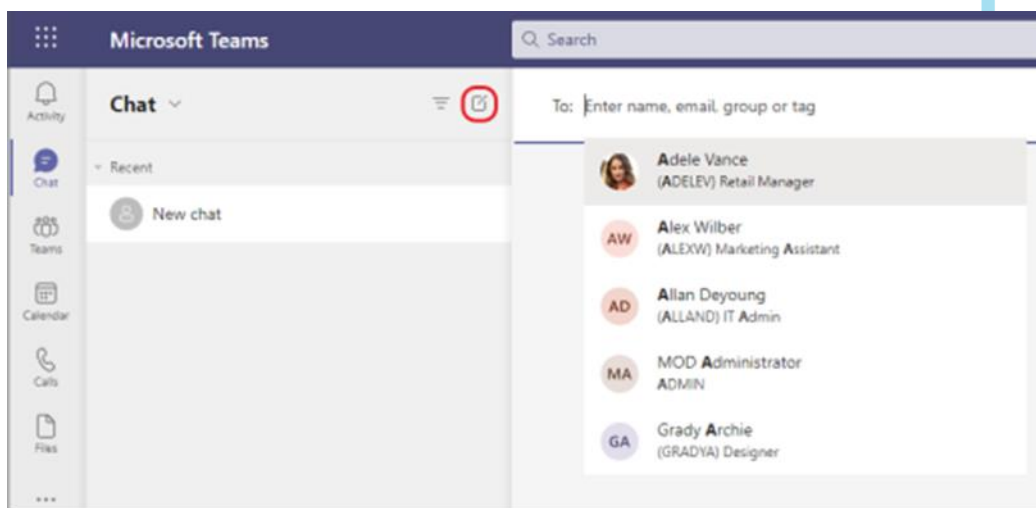


Figure 4 - Chatting function

3.2 Supporting Digital Resources

Microsoft Teams consists of digital resources to support education and learning, digital skills, and professional development. It is a web-based desktop application developed on top of the Electron framework from GitHub, combining the Chromium rendering engine and the Node.js JavaScript platform. It is possible to integrate Microsoft Teams with various digital resources as described below.

Microsoft Office apps such as Excel, PowerPoint, Outlook, calendar, and more than 140 business apps are available on Microsoft Teams.

Add a tab

Turn your favorite apps and files into tabs at the top of the channel

[More apps](#)

Search

Tabs for your team

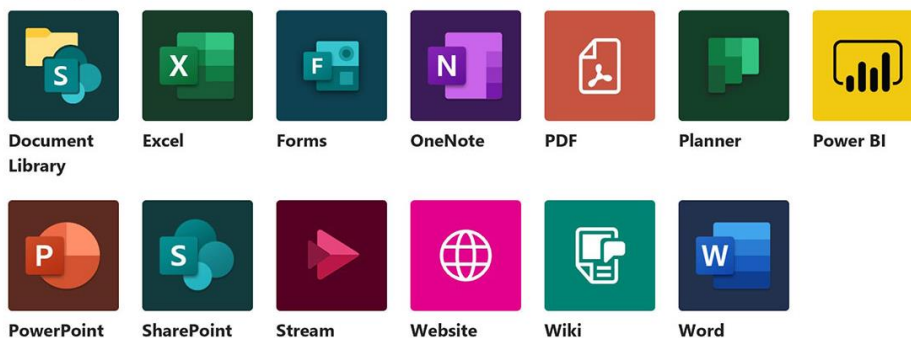


Figure 5 – Screenshot of some Microsoft Office tabs

Augmented and Virtual Reality apps allow users to share and interact with AR/VR activities within Microsoft Teams. This way, classes are made fun, and students are engaged in hands-on experiences and learning using new technologies.

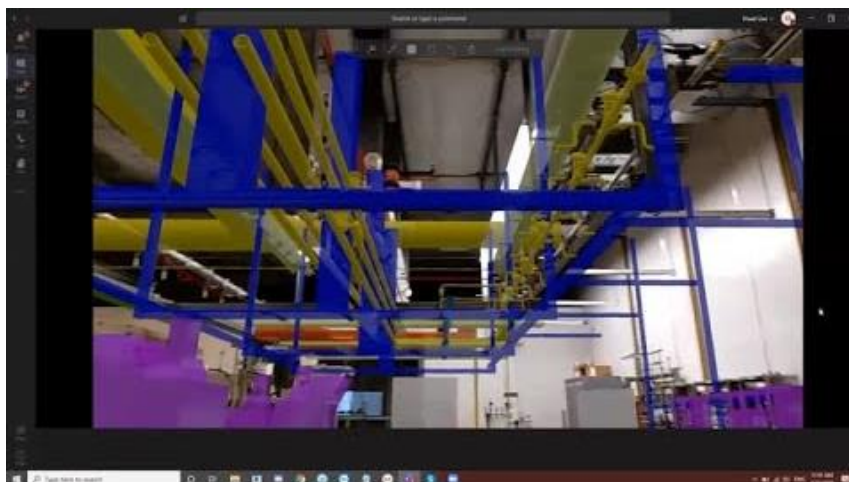


Figure 6 – Example of Augmented Reality app on Microsoft Teams

Screen sharing is instead the process of showing educators or students computer screens or presentation in real-time to the classes.

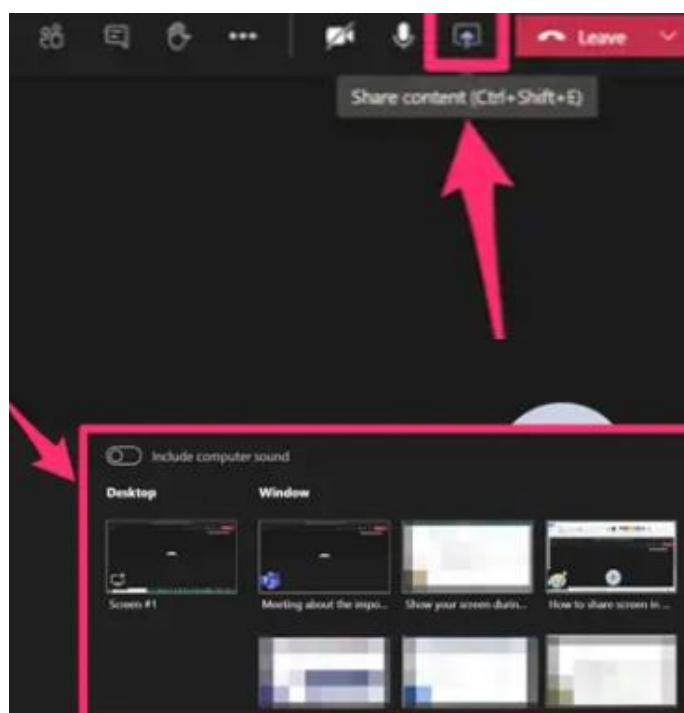


Figure 7 - How to share screen on Microsoft Teams

Other digital resources are shown in Figure 8.

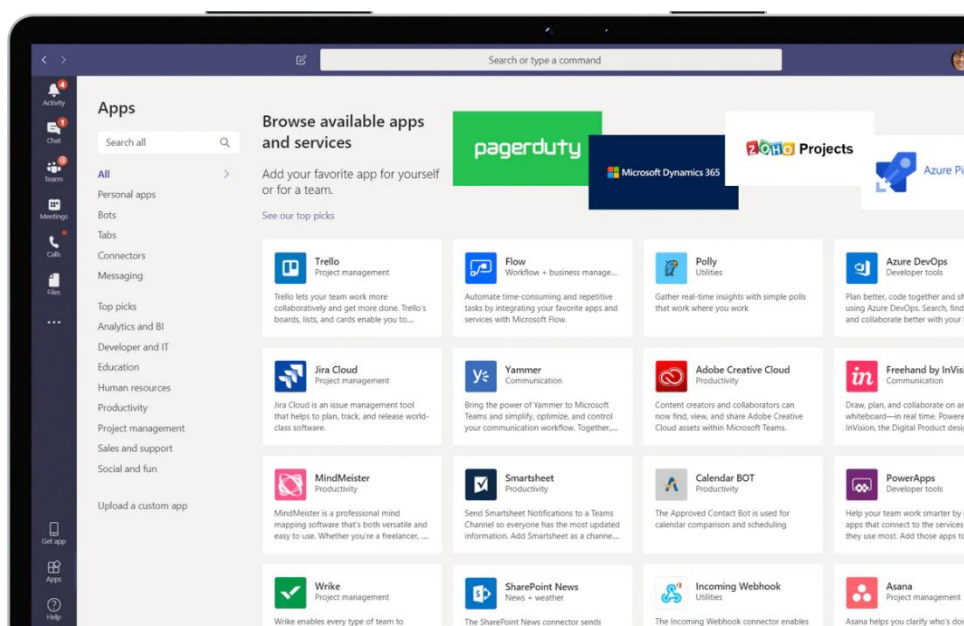


Figure 8 – Apps store of Microsoft Teams

The bottom “Share-to-Teams” allows educators to quickly share a site and content to individual students or the class on Teams. It makes it easy for educators to simplify collaborations and assignments and share interesting and valuable content during e-learning classes.

3.3 Supporting Teaching & Learning

Using Microsoft Teams, educators can engage in productive conversations with students, share docs and websites, and assign and grade tasks. Microsoft Teams allows educators to conduct more interactive lessons and provide adequate and timely feedback. Here, educators can create their classroom team and invite students to become members.

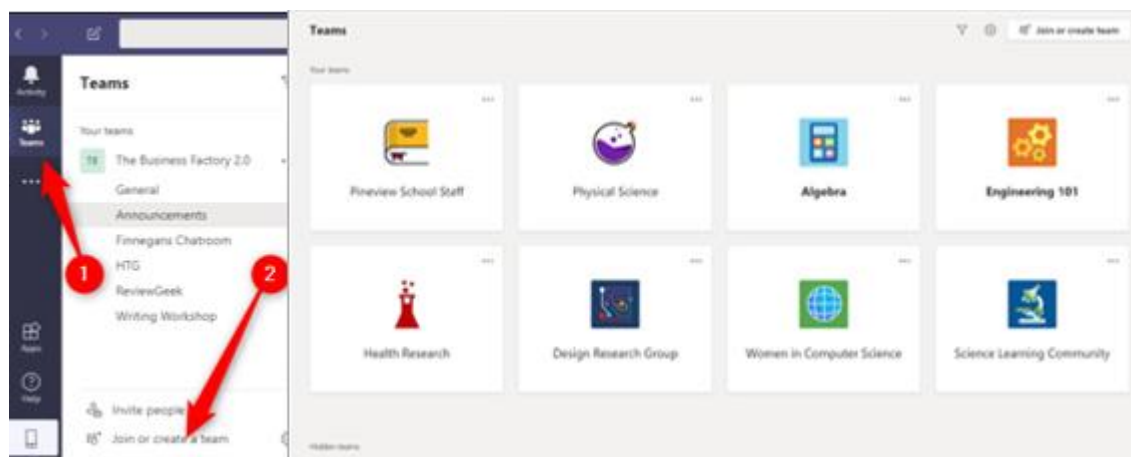


Figure 9 – Teams for online courses

"All together" mode during video calls (up to 49 active screens) and Breakout rooms, i.e., work groups that are smaller than the entire class so that students can work together in groups even at a distance.

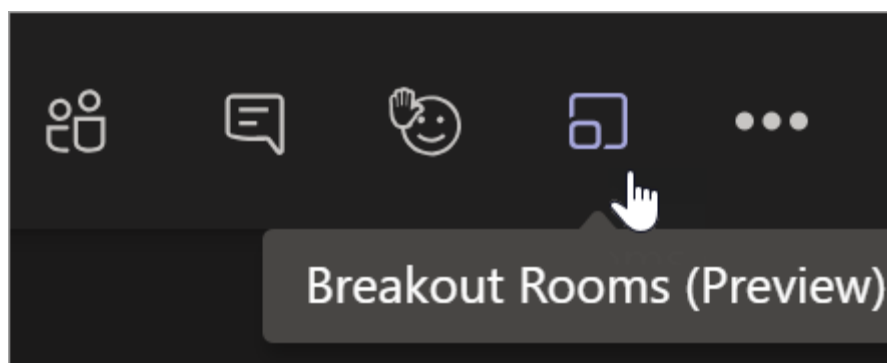


Figure 10 - Breakout rooms bottom

Whiteboard functionality consists of a free-form digital tool to enable multi-handed work. Educators and students can edit material, brainstorm, collaborate in real-time, and share ideas using pens, text boxes, and note-taking together. Whiteboards can be saved as files so students can easily reference their work.

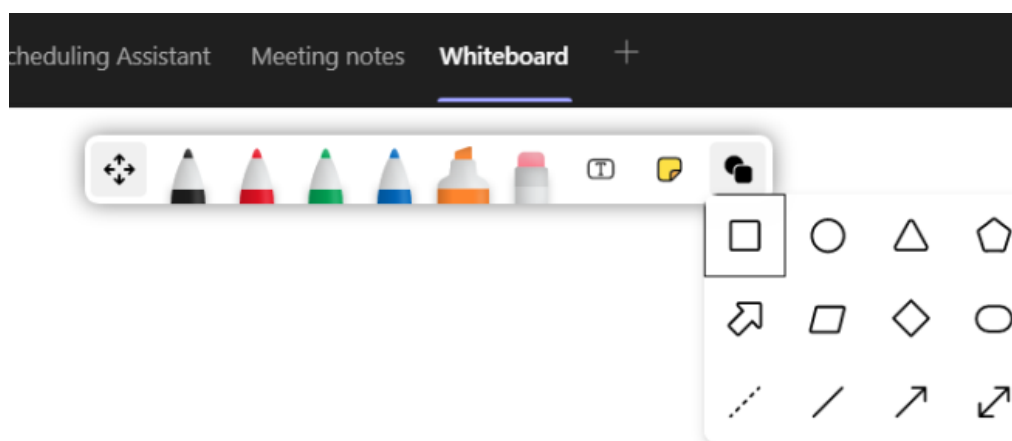


Figure 11 - Whiteboard resource on Microsoft Teams

Listen to posts, chat messages, and activities read aloud using The Immersive Reading Tool in Microsoft Teams for Education. The Immersive Reading Tool also includes grammar tools such as Parts of Speech and Picture Dictionary.

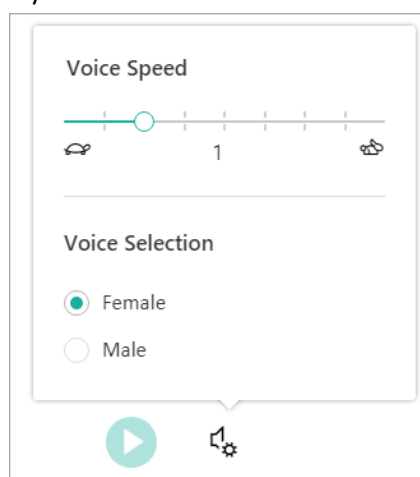


Figure 12 - Example of Immersive Reading Tool functionality



3.4 Supporting Assessment

Microsoft Teams is a tool for assessment, assignment, and grading. This feature helps educators understand how individual students and the class are performing for example by using Quiz forms. Trend analysis or outliers allows educators to better know and evaluate students through grade trends and tasks completed or missed. Educators can also access more detailed information to provide personalized assistance if needed. The vote can be automatically transcribed to the grade book with considerable time savings.

Search students	Quiz Take Home Waves Quiz Jan 21 - 30 points	Graded activity Watch Waves and Friction in Science Jan 13 - 5 points	Essay Essay on space theory film Jan 9 - 30 points	Homework Submit your project progress Jan 7 - 40 points	Homework Create a study guide for Waves Jan 6 - 20 points	Graded activity Begin EM Waves project Dec 20, 2019 - 30 points
Abner, Barney		5	25	35	19	31
Avila, Bernadine		5	26	37	18	37
Garcia, Emma	Viewed	5	28	33	17	39
Hartman, Evangeline		5	25	29	18	35
Jefferson, Dee	Turned in	5	27	31	18	39
Maple, Blake		5	24	34	19	31
Morrison, Clarice		0	23	37	20	34
Neal, Ava		5	22	38	19	36
Robey, Dwight		5	22	36	20	31
Smith, Dylan		5	21	32	20	33
Tucker, Dolores		5	25	34	19	32
Wiley, Christi		5	28	36	19	29

Figure 13 - Example of students' assessment procedure

2G Science		Attendance and tardiness			
	Wed 15 Jul 20 12:23	Thu 16 Jul 20 15:18	Fri 17 Jul 20 14:05	Mon 25 Nov 19 17:33	Summary
1. Perez, Joan	●	●	●	●	
2. Roca, Didac	○	●	●	●	
3. Garcia, Nùria	●	●	●	●	
4. Lopez, Sònia	●	●	●	●	
5. Arellano, Ana	●	●	●	●	
6. Barrera, David	●	●	●	●	
7. Martos, Jorge	●	●	●	●	
8. Mendoza, Eric	●	●	●	●	

Legend:

- Attendance
- Absence
- Tardiness
- Justified absence
- Justified tardiness
- Expulsion

☐ Jump to next student

Figure 14 -Example of Teams gradebook

3.5 Supporting the Empowerment of Learners

Student empowerment is when students acquire the skills to make decisions prioritizing meaningfulness, competence, and goals. Social-Emotional Learning and virtual engagement are essential to helping students reach their full potential. For this reason, Microsoft Teams offers



opportunities for students to express themselves and build connections, such as raising hand function to make students voices heard without disrupting others.

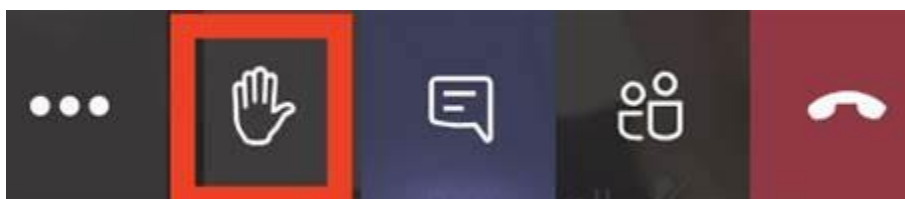


Figure 15 - Raise your hand icon

Microsoft Teams enhance class members with rich resources that can be shared directly in a channel or a Tab, such as content and curriculum. Empowerment of learners is also supported by scheduling tasks through a calendar with important dates, deadlines, and assignment descriptions. Teams also allows the class to create a group calendar.



Figure 16 - Example of Calendar scheduling on Microsoft Teams

The Teams platform also allows direct discussion among individual students to encourage the theme of shared learning within digital classes.

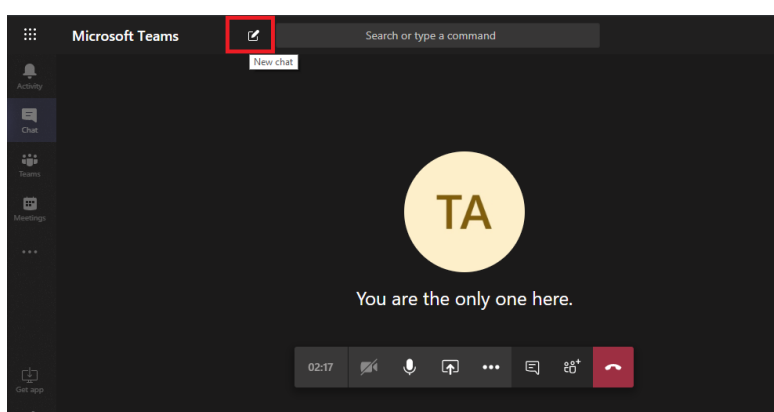


Figure 17 - Private meeting modality

3.6 Facilitating Learners' Digital Competence

Leveraging the Microsoft Teams capability helped students address several challenges developing transferable skills to use in their careers, such as digital skills for content creation, interactive lessons, and multimedia presentation. Microsoft Teams usage accelerated classroom digitization, leading students to perform tasks and assignments using tools they once might have used directly in the

workplace. Excel, PPT, and other Microsoft Office apps integrated with Microsoft Teams allow students to develop digital skills, also encouraged by the Whiteboard box and collaborative spaces where they can post their work and comment on or appreciate colleagues' work.

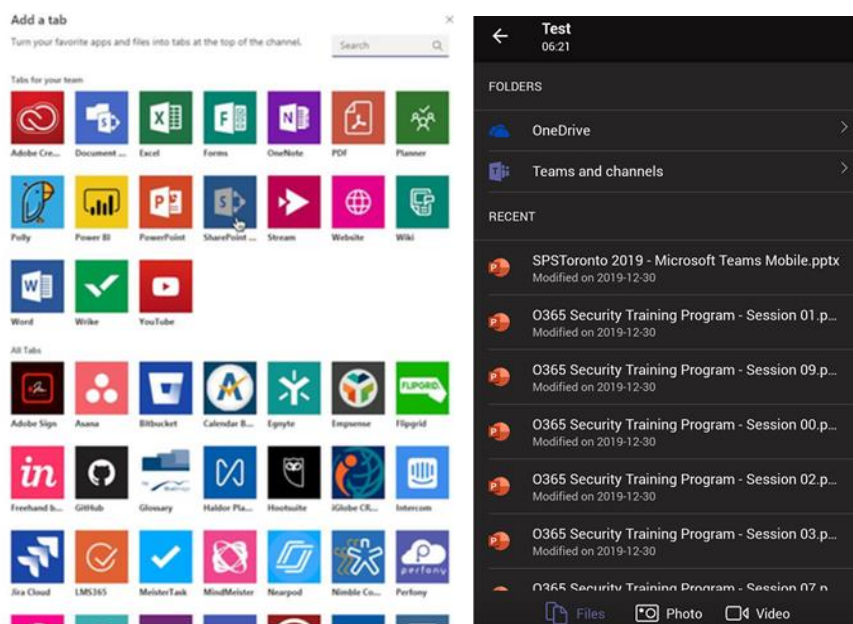


Figure 18 – Digital competences for using applications and creating assessment materials

To conclude, all the main functionalities are summarized in the table below.

Table 2 – Summary of all functionalities of Microsoft Teams

Summary of functionalities	
Student monitoring	Real-time verification of student work (e.g., Insights App).
Chat box	Students write their questions or reactions keeping engaged
Microsoft Office and other apps integration	Excel, Power Point, Outlook, calendar, as well as more than 140 business apps are available.
Augmented and Virtual Reality	Sharing and interacting with AR/VR activities
Screen sharing	Show educators or students computer screen
Share-to-Teams bottom	Easy site sharing to student or class
Teams creation	Creating a real-time digital classroom inviting students to become members.
"All together" mode	Up to 49 active screens.
Breakout rooms	Smaller working groups of the whole class.
Whiteboard	Free-form digital tool to enable multi-handed work.
Immersive Reading Tool	Easily listen to posts, chat messages, and activities.
Student assessment	Student assessment, quiz forms, analysis of grade trends and outliers.
Raise your hand	Student opportunities to express themselves and build connection without disrupting others.
Calendar scheduling	Individual or group calendar for tasks scheduling with important dates, deadlines, and assignment descriptions.
One-on-one or group meeting	Direct discussion among individual or groups of students



4. Tutorial Video and PowerPoint slides

The ACADIGIA resources for Microsoft Teams are available on the website [here](#).