
Teacher's guide to using Google Apps at the UOC

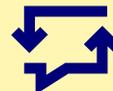
Learning Processes Team
eLearn Center
November 2018



**Cloud work
space**



**Videoconfe-
rencing**



**Instant
messaging**



Groups



**Time planning
and
management**



**Creating and
editing tools
and resources**



Universitat Oberta
de Catalunya



R&I

eLearn Center
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Introduction

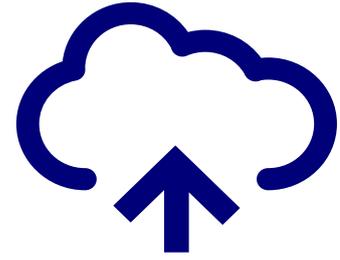
The evolution of digital environments and tools has led to uses of technology that are increasingly pervasive and social. These uses of technology are present throughout our everyday activities: in the ways we access information, communicate, write things down and organize our lives, and across professional, educational, recreational and personal contexts. And in this global scenario, masses of users are adopting software suites such as Google Apps as their main work environment.

This guide presents different combinations of Google Apps that serve six specific uses. It introduces them from a teaching perspective so they can be applied in line with the UOC's online learning model, and includes instructions, recommendations and ideas about methods and activities you might like to try implementing.

The guide was produced on the back of experiences using Google Apps in pilot tests with a variety of programmes, for example the UOC's Master's Degree in Education and ICTs, Bachelor's Degree in Business Administration and Management, Bachelor's Degree in Law, and ICT Skills courses. Another important contribution to the guide was the guidance provided by the Technology department, which offered the benefit of its experiences bringing Google applications to all different groups throughout the UOC community.

This is the first edition of this guide, which the eLearn Center intends to be a project with ongoing developments, subject to additions and updates reflecting Google's evolution, new forms of integration in the context of the UOC and, in particular, good practices stemming from teachers' and students' usage of the apps.

1 Cloud work space



This is a cloud computing environment that enables different types of folders and documents (texts, presentations, images, spreadsheets, etc) to be created and shared among several users. The associated office automation applications enable documents to be edited both individually and simultaneously among several users. Users can also share comments, track versions and export the documents to other formats (PDF, Word, PPT, etc). The person who creates the space owns it and can invite other users and assign them viewing, editing or administration permits. They can even generate a link to the folders or documents so that they can be accessed via internet and assigned their privileges.

The cloud work space fosters participation and contributes to developing teamwork abilities, joint decision-making and collaborative knowledge building between students and teachers.

It can entail use of the following tools:



Drive



Documents



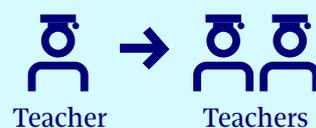
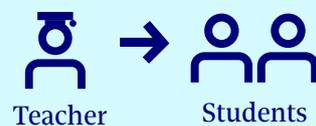
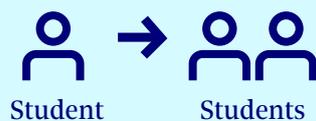
Presentations



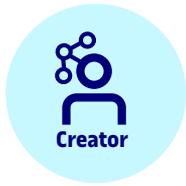
Spreadsheets

+ others

Who do we use it with?



How do we do it?



Creator



Participants

- | | |
|--|---|
| <ol style="list-style-type: none"> 1. Defines or decides the purpose (teaching use). 2. Creates the folder or document to be edited or shared. 3. Invites the corresponding participants to the folder or document. 4. Assigns viewing, editing or administration permits to the participants. 5. Takes part in collaborative work with the tasks that correspond to his or her role. | <ol style="list-style-type: none"> 1. Access the shared folder or folders. 2. View, create and modify shared documents. 3. Take part in organizing the content in accordance with their role. 4. Add comments to the shared documents in accordance with their role and the permits assigned to them. |
|--|---|

Things that we can do

➤ Individual work.

Personal use consisting of both students and teachers can store and edit their own documents for different purposes within the learning activity.

➤ Informal group work between students.

Several students store and edit documents that are shared with other students for different purposes within the learning activity.

➤ Formal group work between students.

Collaborative learning experiences, allowing the work space to be organization and

have the dynamics related with different methodologies, such as PBL (project-based learning), case studies, group assignments, etc.

➤ Project (Final Bachelor's Degree Project and Final Master's Degree Project) and thesis supervision.

Students share different parts and versions of their thesis or final degree project with their tutor or thesis supervisor in order to obtain personalized feedback, advice and guidance in the form of comments or amendments throughout the creation process.

➤ Practicum management and monitoring.

The people involved in performance of a practicum (the University's tutor, the external organization's tutor, supervisors and the student

performing the internship) share the student's outputs (blogs, report versions, outputs about the student's professional activity, etc), and also methodological, educational and administrative documentation.

➤ Collaborative work by teaching staff.

Groups and teaching staff work together with different purposes, for example, UOC faculty with affiliated teaching staff to create new courses, research professors who generate a paper within a research group, deans and UOC faculty who work together in designing programmes, etc.



Remember that...

- Both students and teachers can create a cloud work space at any time, but whoever creates it becomes its owner and is responsible for running it.
- Before managing access to other people's folders and files, particularly as regards the assignment of permits, detailed knowledge is required about Drive's behaviour with respect to these functions.
- By enabling the options to share or make a document public, we lose control of the document's content, which can even reach unrelated people with whom we did not intend to share this information. Remember that the privileges assigned to a folder are inherited by all the files and new folders we create inside it.
- If we give permits to the users with whom we have shared the space to invite other people, we lose control of access to its content.
- We should avoid distributing sensitive data, documentation or learning resources without appropriate permits and licences. If documents and folders are shared with people who do not have an e-mail address with the UOC domain, it is important to check first whether the information can be made public outside of the University's work environment.
- If the cloud work space is used for collaborative work, we must explicitly state the purpose for which we are carrying out this work, assign roles and tasks, share basic operating rules and organize the folders well; these are aspects that improve the work group's efficiency and functioning, particularly in the informal spaces where there is no previously stipulated organization.
- The work space must be readily identifiable by everyone who has access to it, and it must be placed in the teaching context in which it has been generated. Accordingly, information such as the course code, an acronym for its title and the semester in which the activity was begun, the name of the bachelor's degree or master's degree to which it belongs and, especially, the name that identifies the working group must be present in the folder and file structure that we create. For example: Group 1 Project M1.330 Interfaces Bachelor's Degree in Multimedia 2019-2.

Other uses it can be combined with



Videoconferencing



Groups



Creating and editing tools and resources



Time planning and management

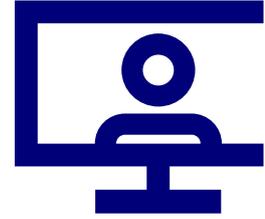
More information

[Google Suite. A best practices website on the use of Google apps created for the affiliated teaching staff.](#)

[Product-driven learning. Advice, guides and other resources for using G Suite in the work place.](#)

2

Videoconferencing



This is a synchronous conversation made using a video call with the Hangouts Meet application. It can be between two people or in a group between several participants (with a maximum of 50). During a videoconference, it is also possible to share each device's screen with other people during the conversation. The person who creates the conversation becomes its owner and invites the participants. It also allows the video channel to be disabled so that it becomes a voice only conversation.

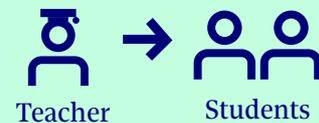
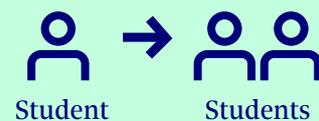
Videoconferences foster interaction, increase the sensation of proximity and help develop teamwork abilities, communication skills and negotiation skills among students.

Tool involved:



Hangouts Meet

Who do we use it with?



How do we do it?



Convenor

1. Defines or decides the purpose (teaching use).
2. Specifies the date and time on which the conversation will take place.
3. Chooses who will take part in the conversation.
4. Makes the call.
5. Takes part in the conversation as required by his or her role.



Participants

1. Log on to the application and accept the convenor's call.
2. Take part in the conversation in accordance with their role.

Things that we can do

➤ Informal conversation between students.

Two or more students start a conversation spontaneously for different purposes related with the learning activity.

➤ Group meetings in group assignments between students.

Conversations linked to collaborative learning activities related with methodologies such as PBL (project-based learning), role playing or group assignments, as part of their dynamic.

➤ Synchronous presentations.

Give an oral presentation for other participants, sharing information by means of slides or documents in other formats. These presentations can pursue a variety of

purposes: describe a project to a work group, present a research project's results to other colleagues or defend a project as part of its assessment, among other things. During the presentation, the participants may interact following a script or in accordance with established convention.

➤ Direction and supervision of projects (Final Bachelor's Degree Project and Final Master's Degree Project), thesis and practicum.

Students and their tutor or project, thesis or practicum supervisor hold synchronous meetings to obtain personalized feedback, advice and guidance concerning the work done, comment on changes and discuss improvement proposals during the entire creation process.

➤ Advice and feedback.

A teacher arranges a specific conversation with a student

or a small group of students with the purpose of offering advice or feedback on the learning activity.

➤ Teaching staff work meetings.

Conversations between teaching staff who work collaboratively together with different purposes, such as UOC faculty with affiliated teaching staff to create new courses, research professors who generate a paper within a research group, deans and UOC faculty who work together in designing programmes, etc.

➤ Structured and semi-structured interviews for research purposes.

Conversations between a researcher and one or more informants with the purpose of obtaining qualitative data within the framework of a research project.



Remember that...

- Both students and teachers can start a conversation; the person responsible for the conversation is the person who makes the call or convenes the meeting via the calendar. The people who are invited to a conversation are entitled to turn it down, particularly if it is an informal conversation and not part of the teaching activity.
- Within the framework of the teaching activity, conversations cannot be held indiscriminately. Neither teachers nor students can make calls directly or spontaneously to other users. They must always be planned and be an explicit part of a dynamic or activity, or they must be arranged beforehand by means of an asynchronous medium (calendar, groups or mail).
- The participants in the conversations must be informed beforehand of the conversations' features and terms before accepting them (purpose, duration, participants, etc).
- The UOC's educational model is based on the principles of asynchrony and ubiquity, thereby guaranteeing maximum flexibility in access to all students. Accordingly, participation in conversations can never be a condition for successful completion of a teaching activity or passing a course, except for exceptional cases such as defending a final degree project before an assessment panel. In all other situations, any dynamic that involves a conversation must always have an alternative that does not require simultaneous presence in order to guarantee equal conditions for those students whose formative process at the UOC is completely asynchronous.
- Videoconferences are a useful communication tool for engaging in communication dynamics in teaching environments (discussion, presentation of activities, work meetings, tutorials, etc). Under no circumstances can they be used for giving online lectures or for applying any other method intended to convey the course's content.

Other uses it can be combined with

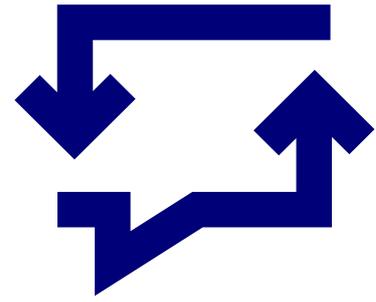
 Time planning and management

More information

[Google Suite. A best practices website on the use of Google apps created for the affiliated teaching staff.](#)

[Product-driven learning. Advice, guides and other resources for using G Suite in the work place.](#)

3 Instant messaging



This is a system of semi-synchronous text conversations based on the Hangouts Chat application that integrates multiple functions that expand this type of communication's possibilities. As well as holding conversations between two or more participants, it can be used to create on-line meeting rooms, send messages to several participants simultaneously, attach files from Drive or create conversations in the video chat (Hangouts Chat). Furthermore, in addition to human users, we can also use Hangouts Chat to invite bots to the conversations so that they can carry out different tasks and functions.

Instant messaging is particularly useful in mobile devices, as it fosters ubiquitous work, provides immediacy and increases the sense of proximity without losing connectivity with the environment, tools and applications we use.

Tool involved:



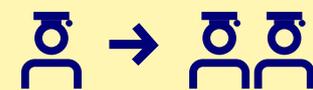
Hangouts Chat

Who do we use it with?



Student

Students



Teacher

Teachers

How do we do it?



Convenor



Participants

- | | |
|--|---|
| <ol style="list-style-type: none"> 1. Defines or decides the purpose (teaching use). 2. Decides the preferred option: start a simple conversation, create an online meeting room or start a new thread. 3. Selects and invites participants. 4. Starts the conversation by sending the first message. 5. Takes part in the conversation as required by his or her role. | <ol style="list-style-type: none"> 1. Are notified when there are new messages or are invited to a new chat. 2. Enter the chat. 3. Take part in the conversation in accordance with their role |
|--|---|

Things that we can do

➤ Informal instant messaging conversation between students.

Two or more students start a conversation spontaneously for different purposes related with the learning activity; two or more students share an online meeting room with one or more conversation threads as a permanent, ubiquitous communication channel.

➤ Instant messaging channel for a student work group.

An online meeting room with one or more conversation threads as a permanent, ubiquitous communication channel for holding conversations linked to collaborative learning activities related with methodologies such as PBL (project-based learning), role playing or group assignments as part of their dynamic.

➤ Instant messaging channel for teaching staff tasks and projects.

An online meeting room with one or more conversation threads as a permanent, ubiquitous communication channel for holding conversations between teaching staff working collaboratively for different purposes; for example, UOC faculty with affiliated teaching staff to create new courses, research professors who generate a paper within a research group, deans and UOC faculty who work together in designing programmes, etc.



Remember that...

- Both students and teachers can use instant messaging conversations and channels. The person responsible for them is the person who starts the conversation or creates a channel to which other participants are invited. However, the people invited to the conversation are entitled to refuse to take part.
- Within the framework of the teaching activity, instant messaging cannot be used indiscriminately. It is not advisable for teachers and students to propose instant messaging conversations directly and spontaneously with other participants.
- The participants in the instant messaging conversations or channels must be informed beforehand of their features and terms before accepting them (purpose, duration, participants, etc).
- The UOC's educational model is based on the principles of asynchrony and ubiquity, thereby guaranteeing maximum flexibility in access to all students. Accordingly, instant messaging can never be a condition for successful completion of a teaching activity or passing a course.
- It is recommended to reserve instant messaging for informal or other uses that complement the teaching activity, and avoid uncontrolled use between teachers and students. For these cases, it is recommended to opt for a previously planned videoconference or Gmail.

Other uses it can be combined with

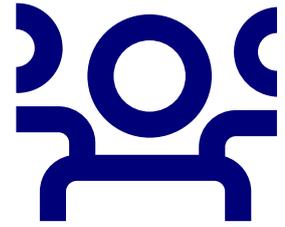
 Videoconferencing

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4 Groups



This is an asynchronous communication system based on the Groups application. It gives a team's members access to different types of forums adapted to different communication dynamics. It can be used to create distribution lists, discussion forums and Q&A forums. It also offers the possibility of tagging or highlighting subjects, sharing Drive folders and files or sharing calendars, among other functions.

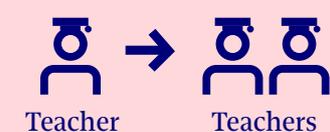
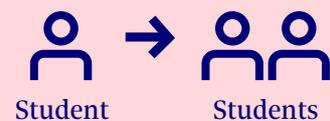
Groups are a very useful communication tool for holding course-focused discussions, and also as a formal communication channel in project management and motivating work groups.

Tool involved:



Groups

Who do we use it with?



How do we do it?



Initiator



Participants

1. Defines or decides the purpose (teaching use).
 2. Decides the most suitable type of forum.
 3. Creates the group.
 4. Selects and invites participants.
 5. Publishes the first subject or message.
 6. Takes part in accordance with his or her role and the type of forum.
 7. Administers the group.
1. Search for the group or receive an invitation from a group.
 2. Join the group.
 3. Take part in accordance with their role and the type of forum.

Things that we can do

➤ Discussion environment for student teams.

A permanent communication channel in the form of a forum to hold discussions or share information about collaborative learning activities and projects. This use is related with methodologies such as PBL (project-based learning), role playing or group assignments.

➤ Newsletter.

A distribution list is created to publish a selection of news and current affairs resources

prepared applying teaching criteria. Students enrolled on a programme or a series of courses can subscribe to it and receive the news items in their mailbox.

➤ Online debates.

Discussions between students about one or several issues proposed as a learning activity. By creating a forum, the moderator and the participants can use functions such as open topics, highlight messages and tag interventions depending on the purpose, methodology and debate dynamic applied.

➤ Q&A forum as support for an internship community.

Agents with different roles

and backgrounds share knowledge and experience around a cross-disciplinary activity. For example, a practicum environment shared by internship centre tutors, academic managers, faculty and students. The participants ask questions that are answered by the other agents, so that each one contributes information related with their outlook or field of expertise.

➤ Q&A forum with input from an invited expert.

Students subscribed to the group ask questions about a particular subject area that are answered by an expert or by a team of experts. For example, an expert in artificial intelligence (AI) and bots presents a

text or a video about the applications of AI, and a group of students studying for their bachelor's degree in Teaching ask questions about their possible educational uses.

➤ **Discussion forum for faculty linked to teaching projects or**

processes.

A forum with one or more conversation topics as a permanent communication channel for holding discussions or sharing information in teams that work collaboratively for different purposes. For example, faculty and technical staff

involved in interdisciplinary projects, research professors who generate a paper within a research group, deans and UOC faculty who work together in designing programmes, etc.



Remember that...

- The groups enable tools and environments to be created that complement the learning activity, but under no circumstances can they replace the classrooms' communication tools (noticeboard, forum, debate), defined in line with the UOC's teaching activity model.
- The use of groups must be adapted in order to carry out specific activities that require their communication functions, avoiding redundant uses or which overlap with the classroom's communication channels.
- The groups enable participation by people from different areas, including from outside of the UOC's teaching activity. Distribution of sensitive data, documentation or learning resources without appropriate permits and licences should be avoided.

Other uses it can be combined with

 Cloud work space

 Time planning and management

 Creating and editing tools and resources

More information

[Google Suite. A best practices website on the use of Google apps created for the affiliated teaching staff.](#)

[Product-driven learning. Advice, guides and other resources for using G Suite in the work place.](#)

5 _____

Time planning and management



This consists of creating and using calendars in an integrated manner with the Calendar application and has the purpose of organizing work, planning productivity and managing personal and group time. It enables different calendars to be created and integrated with multiple purposes, which can be shared among several users and viewed simultaneously. Using Calendar, it is possible to convene work meetings, use the milestones as online meeting rooms with direct access to conversations via the Hangouts Meet application, plan tasks and activities within a project, or share events with a community by publishing a calendar with a URL. It also enables you to create and manage task lists and add annotations with the Tasks and Keep applications.

Time planning and management are indispensable for the effective functioning of collaborative work groups. From the individual viewpoint, this fosters student autonomy by improving productivity and personal management in general.

It can entail use of the following tools:



Calendar

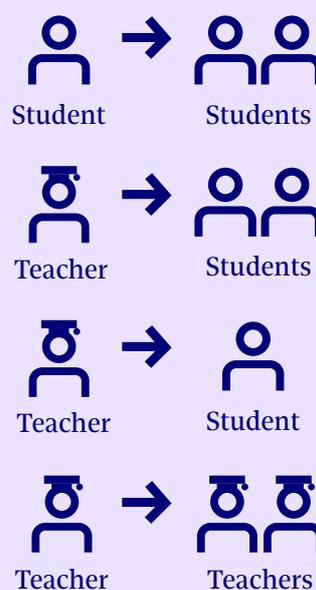


Keep

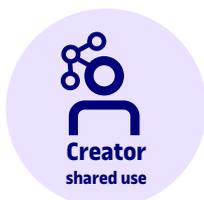


Tasks

Who do we use it with?



How do we do it?



1. Defines or decides the purpose (teaching use).
 2. Creates the calendar.
 3. Assigns viewing and access permits.
 4. Selects users with whom the calendar will be shared and assigns permits to them.
 5. Publishes milestones in accordance with the calendar's purpose.
 6. Consults availability of the users that he or she wants to invite to milestones or meetings.
 7. Calls other users to a milestone or meeting.
1. Add the calendar to *My calendars*.
 2. Enable and disable simultaneous display with other calendars.
 3. Publish new milestones in accordance with their roles, permits and the calendar's purpose.
 4. Accept or reject milestones or meetings created by other users.



1. Create the calendar.
2. Publish milestones.
3. Manage simultaneous display with other calendars.
4. Publish and manages pending task lists.
5. Publish and manage annotations.

Things that we can do

➤ Management and planning of individual work.

Personal use consisting of both students and teachers use calendars to plan their tasks and manage their time in an integrated manner. This helps them organize their work and combine different fields of activity.

➤ Management and planning of group work between students.

Creation of a shared calendar for planning tasks, entering deadlines or calling online follow-up meetings (Hangouts Meet) for projects and collaborative activities related with methodologies such as PBL (project-based learning), case studies, group assignments, etc.

➤ Planning and monitoring of tutored projects (Final Bachelor's Degree Project and Final Master's Degree Project) thesis and practicum.

Shared use of a calendar between a student and his or her

centre tutor or thesis or project supervisor with the purpose of planning monitoring sessions, entering deadlines, etc.

➤ Managing and planning of collaborative work by teaching staff.

Creation and shared use of calendars by teaching staff who work together with different purposes. For example, team of teachers to create new courses, research professors who generate a paper within a research group, deans and UOC faculty who work together in designing programmes, etc.



Remember that...

- Ultimately, time management is a personal activity. Each person is responsible for organizing his or her time depending on the commitments with other people and personal availability.
- Time management is a complex activity, as it involves the coexistence of multiple calendars that may refer to different areas (personal, academic, professional, social, etc) and which, in some cases, may overlap.
- With good time planning and management, it is easier to combine activities, which in turn helps improve the balance between personal, academic and professional life.
- Calendars are not only used to publish milestones and specific events. They are very useful for organizing personal work by blocking off time slots that we want to devote to productive activities (continuous assessment activities, correcting activities, preparing documents, etc).
- We should avoid sharing our personal calendars with groups and people from the academic and professional sphere, as this is part of our right to confidentiality.
- We should respect other users' decision to turn down a call to a meeting, as personal autonomy in time management must be preserved.

Other uses it can be combined with

 Videoconferencing

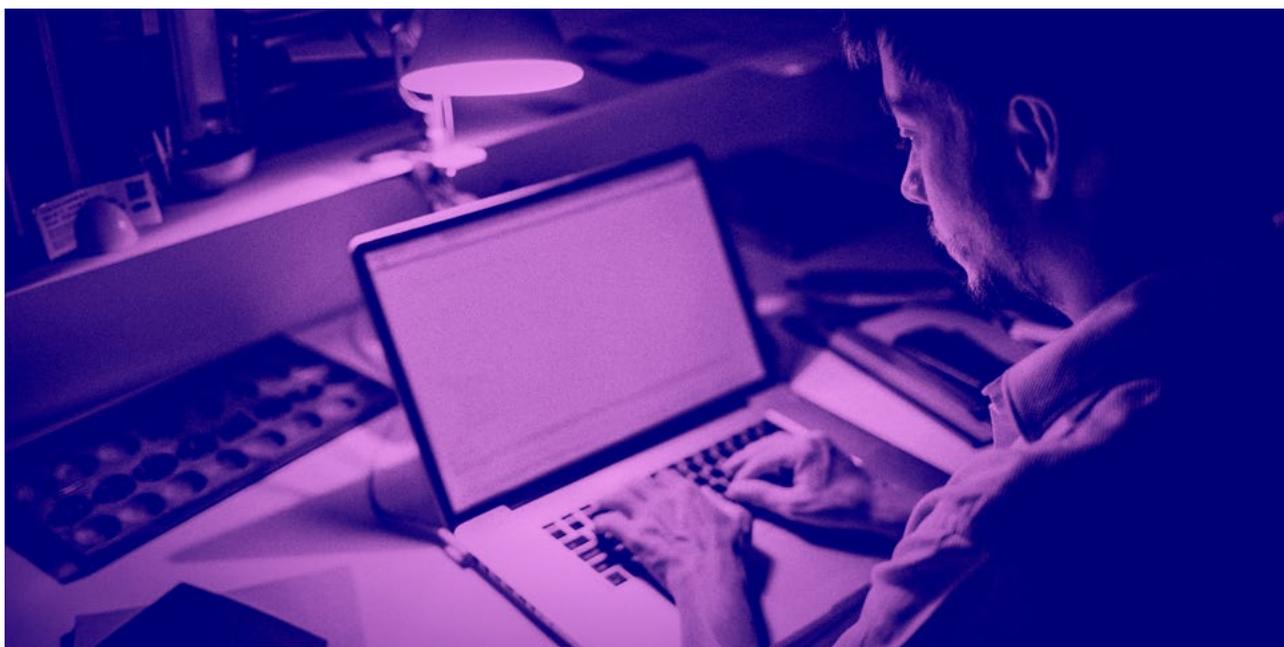
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6

Creating and editing tools and resources



This consists of using Google's cloud computing applications, to prepare documents, tools and other resources related. It entails the use of Drive as a file storage system, enabling individual or shared use of all the applications. It allows simultaneous document editing among different users, enables version tracking and includes the option of allowing all users involved in editing a document to make comments that are integrated with the content.

The creation and editing of tools and resources is used to generate documents and tools for the learning activity for instrumental or research purposes, such as guides, guidelines, templates, questionnaires, activity texts, overviews, presentations, reports, etc. It also facilitates collaborative work and fosters co-editing of resources between students and teachers.

It can entail use of the following tools:



Drive



Documents



Presentations



Google Sites

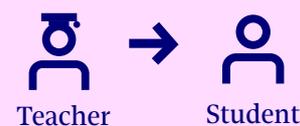
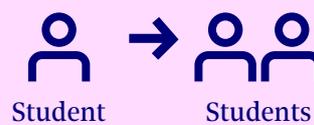


Spreadsheets

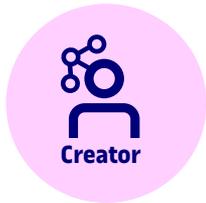


Forms

Who do we use it with?



How do we do it?



1. Defines the tool or resource that he or she wishes to create.
 2. Selects the most suitable application and creates the document.
 3. Selects users who will take part in the editing and invites them.
 4. Assigns viewing, editing or administration permits to the participants.
 5. Edits the document, performing the tasks corresponding to his or her role.
 6. Adds and answers comments about the edited content.
1. Access the shared document.
 2. Edit or view the document, performing the tasks corresponding to their role.
 3. Add and answer comments about the edited content.
 4. They may invite other participants to edit or view the document, if they have permits for this.

Things that we can do

➤ Text documents.

Students or teachers write texts with varied formats and structures and with different objectives, such as writing activity texts, performing assignments, drafting guides, offering guidelines or guidance, generating research reports, producing articles, etc.

➤ Graphics and visual resources.

Students or teachers prepare slide presentations, infographics and other graphic resources with different objectives, such as submitting an assignment or project, showing data from a research

process, creating a diagram about a specific subject area or content, drawing a process, designing graphs and figures for text documents such as assignments, assessment activities or articles, etc.

➤ Websites.

Publication of a site for disseminating an academic or learning activity, or as an environment for sharing relevant information within a project that enables the entire work group to follow it. It can include both text content in HTML format and integrated external resources such as documents and folders, calendars or forums guaranteeing access to up-to-date information.

➤ Questionnaires and surveys.

Publication of forms with teaching or research purposes such as creating assessment activities, developing questionnaires to detect previous knowledge, identifying interests or measuring the level of understanding attained, sending research questionnaires to specific groups within the university community, etc.

➤ Monitoring and assessment tools.

Preparation of matrices to monitor progress of both individual students and working groups in the learning process, creation of rubrics and tools to support activity correction, etc.



Remember that...

- Both students and teachers can create cloud documents at any time, but whoever creates them becomes their owner and is responsible for them.
- By enabling the options to share or make a document public, we lose control of the document's content, which can even reach unrelated people with whom we did not intend to share this information. This can also happen if we give permits to invite other people to the users we have shared it with.
- If documents are shared with people who do not have an e-mail address with the UOC domain, it is important to check first whether the content we are preparing can be made public outside of the University's work environment.
- If a document is being edited collaboratively, assigning roles and tasks to the participants and sharing basic working rules are aspects that improve the work group's efficiency and functioning.
- The documents that we edit must be readily identifiable by everyone who has access to them. Accordingly, it would be useful to include information in the file names such as the course code, an acronym for its title and the semester in which the activity was begun, the name of the bachelor's degree or master's degree to which it belongs or the name that identifies the working group. For example, Group 1 Project M1.330 Interfaces Bachelor's Degree in Multimedia 2019-2.

Other uses it can be combined with



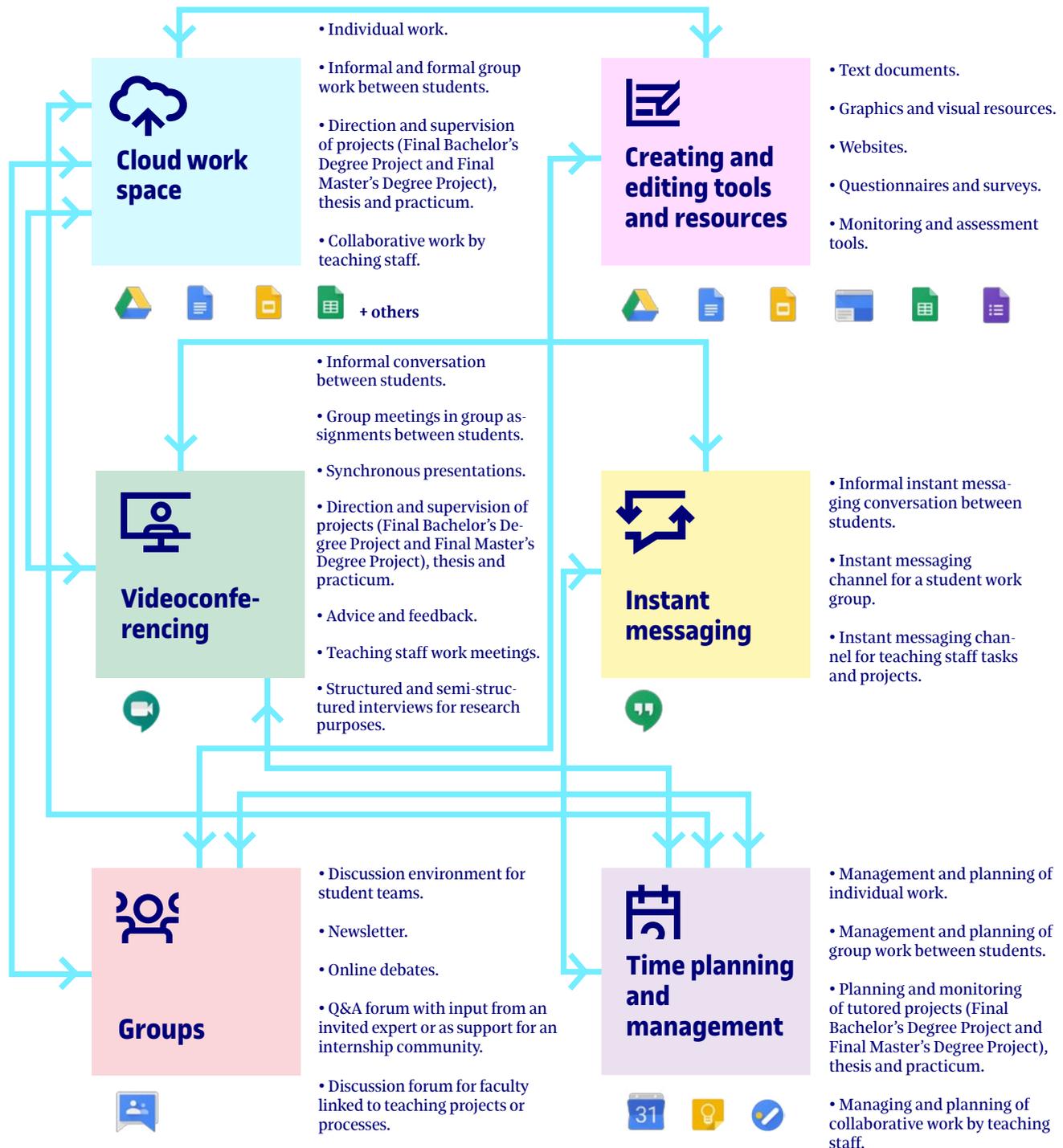
More information

[Google Suite. A best practices website on the use of Google apps created for the affiliated teaching staff.](#)

[Product-driven learning. Advice, guides and other resources for using G Suite in the work place.](#)

Using Google Apps for teaching at the UOC

Things that we can do





Glossary



Drive: a cloud disc drive that can be used to save, create and edit different types of file ubiquitously, both individually and shared within a group.



Documents: an application for creating and editing documents with a conventional word processor format. It enables documents of different lengths and types to be generated, such as reports, articles, letters, annotations, minutes, etc., so several authors can edit them collaboratively and simultaneously.



Spreadsheets: an application for creating and editing spreadsheets for organizing, managing, calculating and analysing data. It enables graphs, tables, lists, project plans, etc. to be created collaboratively, with simultaneous editing by several authors.



Forms: an application for creating forms that can be used to carry out surveys, manage records of events and design self-assessment tests, among other things. It enables the answers obtained to be scored and compiled on a dynamically generated spreadsheet, which can then be used to organize, manage and analyse the data. It also enables automatic generation of results reports



Presentations: an application for creating presentations in slide format. It can be used collaboratively to make proposals, explain ideas, present projects or draft reports with a graphic, visual format. It can integrate not only text but also graphic and audiovisual material, such as images, videos, audio, animations and links to external sources.



Google Sites: a tool for creating and publishing websites. It can be used to personalize them and edit them collaboratively and simultaneously among several users, without any need for previous experience in developing websites. It is useful for publishing information that requires multiple updates, both to share among a particular group (working groups, project teams, etc.) and to disseminate externally.



Calendar: a time-planning tool that not only enables us to manage our personal agenda but also to create, share and publish several calendars, call other users to meetings or open conversation rooms for holding videoconferences.



Tasks: an application that can be used to create and manage pending task lists and put them on the calendar; it can be accessed as a complement from other applications.



Keep: an application that can be used to create and manage annotations both as open text and as lists; it can be accessed as a complement from other applications.



Groups: an asynchronous communication system for creating different types of forum (conventional discussion forums organized by subjects, Q&A forums, distribution lists, etc) and inviting user groups to join it.



Hangouts Chat: an application for holding synchronous conversations in text chat form. It enables groups to take part in chats and create online rooms for projects, work groups, etc. It can also be used to share files and links and add video conversations.



Hangouts Meet: an application for holding synchronous conversations in videoconference form. It enables meetings to be held with participation by several users, and interviews and presentations, from any location.
