COMPARATIVE RECOMMENDATION
REGARDING DIGITAL SOFTWARE

part of

"The Roadmap for Educators in Digital Soft Skills – TRENDSS"

(2020. – 2022.)

Consortium partners responsible with this project:
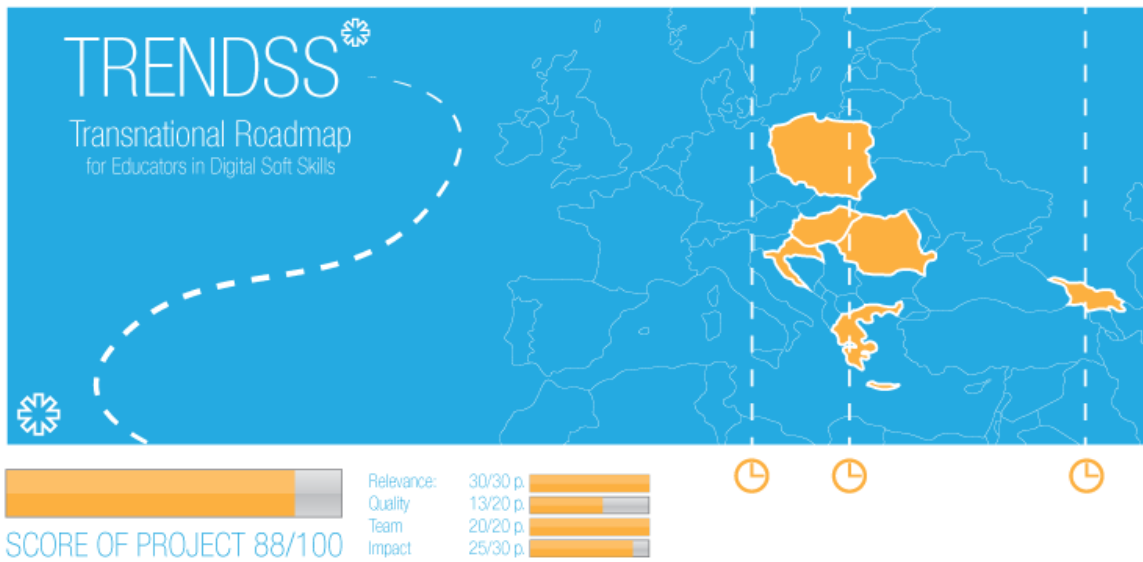
CONTENTS

NAME:

Instagram

LOGO:

HOW TO READ THIS DOCUMENT:

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You will need a basic knowledge of the software to understand some of the points made in this document.

We have analyzed five more online software whose reports are available on our website: www.trendss.eu
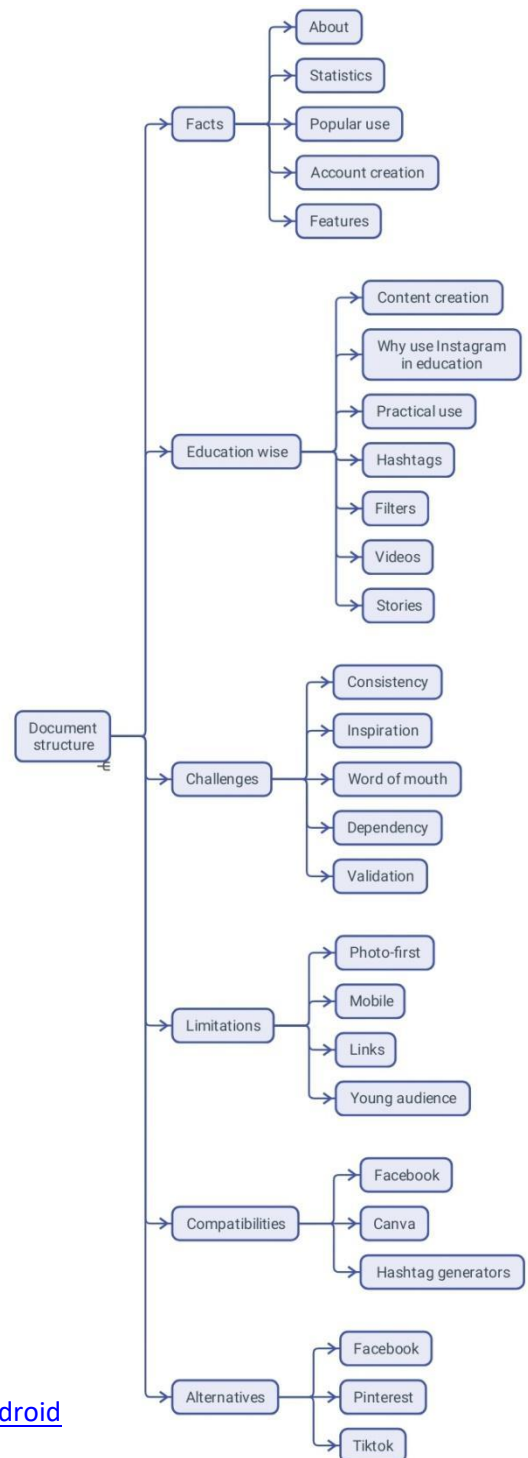
USEFUL LINKS:

WEBSITE:
https://www.instagram.com/
PLAY STORE:
https://play.google.com/store/apps/details?id=com.instagram.android
WIKIPEDIA:
https://en.wikipedia.org/wiki/Instagram

ABOUT
Instagram is a social media app that allows users to upload photos and videos that can be edited with filters and organized by hashtags and geographical tagging.

STATS
Some interesting stats about Instagram:
- The average post on Instagram contains 10.7 hashtags
- 71% of the billion monthly active users on the Instagram app are less than 35 years old
- Instagram users spend an average of 53 minutes per day
- An estimated 500 million Instagram accounts use Instagram Stories every day
- The usage of the #ad hashtag on Instagram increased by 133% from February 2018 to February 2019
- Instagram can generate over four times more interactions on Instagram compared to Facebook
- 71% of US businesses use Instagram
- Instagram helps 80% of Instagram users decide to buy a product or service
- As many as 50% of Instagrammers follow at least one business establishment.
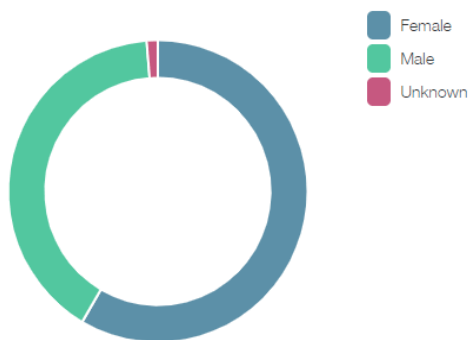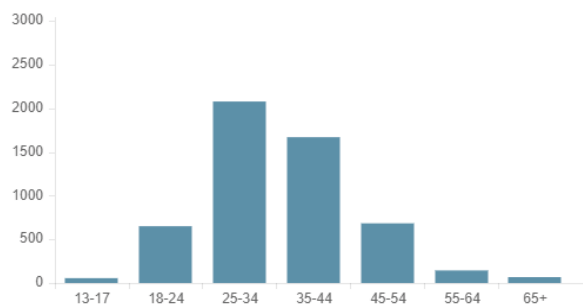
POPULAR USE

Instagram can be viewed as a very capable image sharing tool, but it truly comes to the fore when deployed as a marketing tool to help influencers and brands communicate and connect with a vast audience.

You start by creating an avatar—more precisely, a profile name—picking a picture that people will identify you with and writing a short description about yourself. Then you can post content and interact with the audience called followers, using Instagram features.

Part of Instagram's success is related to its ease of use. It is simple and efficient. But the intuitive knowledge needed to use this app is not by chance. The team behind this app is highly skilled and covers multiple disciplines. Constantly learning from the data it collects from its users, the app is consistently finding better ways to help people express themselves online. By understanding how people behave and communicate, Instagram can provide viral content and experience.

PROFILE NAME, PICTURE AND BIO

You can have a profile and post on Instagram, like any other social media app. When creating your profile, you want it to share something about yourself while being clear, memorable and catchy. Picking up a name can be hard. If you can't decide on one, use this trick: think about the future, and if you would still like it after a couple of years, then it's good enough.

It is important to have a good name because people will identify you with it, and you surely don't want to be stuck with something unattractive or unsearchable. Also, with all sorts of profiles online, you can be mistaken for a troll or a bot, and people won't interact with you. It is widely accepted that people interact more readily if your profile picture is a clear picture of a face.

Also, the bio should express in a few words your profile information.

FEATURES

In Instagram, the tools you have at your disposal are called features or options, or, more specifically: hashtags, stories, polls, sliders, questions. These are mostly used for advertisment, entertainment, marketing, promotion, and sale of products and services.

EDUCATION

CONTENT CREATION

Creating content is essential for Instagram. Content can be considered like any other information, whether it has learning value or is purely entertainment.

Content on Instagram is best kept short and to the point, like bite-sized chunks of what you have to offer. This form is derived after observing user behavior on the platform. Mainly, people have tendency to keep on scrolling and you have to attract their attention. There are studies on the attention span for different ages and types of people. Assessing your psychology can be a useful method to ensure that your content reaches your desired audience. Success, when achieved, will show up in the likes, shares and comments. Not having any response is a response in itself, and it need not discourage but rather intrigue you. Also 1 in 1000 people will comment on something, so don't take it personally if they don't do it on your posts. A more interactive way of manifesting on Instagram are through Stories.

You may feel the pressure to produce something new or as if you are wasting your time because it's different from the hard skills you have usually relied on. However, it is closely related to soft skills, as it is mostly about the relationships you establish with your audience. You have to show what you do in an engaging/entertaining way. The tools you have at your disposal may have different names, but if you are seeking true engagement, you will have to find ways to fascinate your audience.

Usually, if people are interested in the type of knowledge that you provide, they will seek you and find out more.

WHY USE INSTAGRAM IN EDUCATION

Teachers are the original influencers, and education is the best marketing tool. Through these lenses and with this mindset, here is how you can use Instagram in your everyday education activity.

Instagram's features are just one aspect. The true value of its educational usage is based on the reality that people are always on their mobile devices, practically growing up with them and spend a lot of time using this medium for communication. Also, there is a team of skilled people constantly adding features and thinking of ways to improve the usage and engagement of social media apps in general, and Instagram in particular.

Engagement in the classroom is a struggle for many teachers especially with younger generations. Regarding engagement, social media is often perceived as being in competition with education—as something that works against education and only very recently, with it. From this opposition, many psychological conditions arise, among which instant gratification and FOMO (fear of missing out) are just a few.

Engagement with Instagram can be translated into several behaviours related to education:

- inform
- assess
- appreciate
- give feedback
- connect

PRACTICAL USE

HASHTAG
A word or group of characters preceded by the # character.
Used on social media websites and apps, this array of characters helps you search for all messages with the same subject.
Some popular hashtags related to education are: #education - 28 million posts, #teacher - 15 million posts, #teachergram - 1 million posts. Using general hashtags can make your posts more accessible to others, but if you are in a particular niche, you will be found faster by the people interested in your type of content if you use a vocabulary of hashtags that speaks more to them. For example, if you teach architectural drawing, hashtags like #geometry, #architecturaldrawing, #buildingsketch or #archisketch are perhaps more suitable.
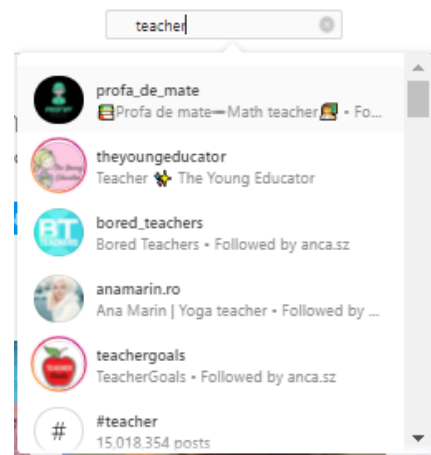
FILTERS
Series of presents that make pictures look different. Initially, they were created to enhance certain features of portraits or landscapes. In 2017 augmented reality face filters were added.
Used in teaching, this feature can look like having a crown on your head while you do a live video lesson or hiding your face under a mask if you are shy or want to make people laugh.

VIDEOS
The clip is a type of audio-visual media content that Instagram allows. Since 2017, the maximum duration of a clip in a post has been 10 minutes. Video content is more interesting for most audiences than text or images. Bringing education in social media means finding more entertaining ways to wrap your dissemination skills. Turning your class into a fun set of videos would make it more engaging for people. In addition to the video content Instagram added IGTV in 2018 and Reels in 2019.

STORIES
Instagram Stories are images or videos that last for only 24 hours. This type of content was introduced in 2016 and 2017, and it has been one of the most popular features of social media ever since.
Within Stories, you can find some options that turn this ephemera way of communication into a powerful way of interacting with your audience.
An educator myth uses stories to give credit to students. Shout-outs, as they are called, are ways of showing appreciation to people who do good and, in some way, exemplify them.
They can also be considered tools for motivating others to do better.
Inside Stories, there are some options like: sliders, polls, questions that people can engage with, and can be most evocative for your practice.
Stories have a frontend – the thing that everybody sees, and a backend – the metrics that only you see. Some of the metrics are:
- How many people have seen the story?
- Who are these people?
- How many people clicked different things in the Story?

Another use for the Story can be for presenting yourself as a teacher/trainer/educator, showcasing your skills and unique approach.
Behind the scenes is a type of content that works every time. Even if it's documenting the process of preparing a course or an actual trip you do in your spare time.
Knowing what type of content your audience is more attracted to is a vital soft skill that you can develop with Instagram if you pay attention to your audience's reactions.

Story Highlights, introduced in 2017, is another related feature that gives the users the ability to make stories permanent.

EMOJI SLIDER
You create it in Stories and then set up an emoji—the one that is most of the time associated with a given feeling—which people can access in the form of a sideways left-right slider.
Practically you can use this to rate states like:
- What's the general mood of your followers?
- How do viewers assess themselves regarding a skill?
- What's the level of engagement with the content?

In the backend, you can see every answer and people can see only the average answer after they interact with the slider.
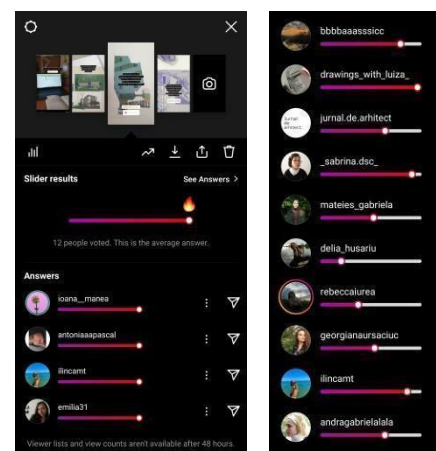
POLLS

These are essentially closed questions that you can post in Stories.
The beauty of this feature is that you can compose questions in such a way that besides the classic yes/no, left/right, and pro/against answers, you can also let your users pick between:
- spelling of words
- important historical dates
- feedback or opinions about certain things

The answers have to be short, but this is a challenge for you to keep the content simple.
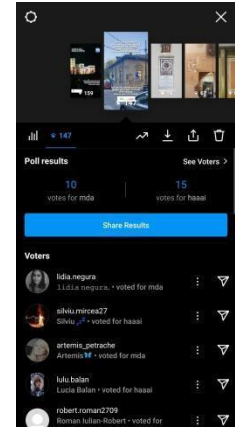
QUESTIONS

This option enables open-ended questions in Stories. The option can have a great impact on your education practice if you use it not only to deliver content and test people but also to receive feedback from them. With the help of the answers to your questions, you can make the delivery of your content more engaging.

In this example, viewers can interact with this content by answering the question. Whereas in polls, they would merely have to tap and choose between two answers, here it is a little harder to interact, but it can be overcome if the content is engaging.
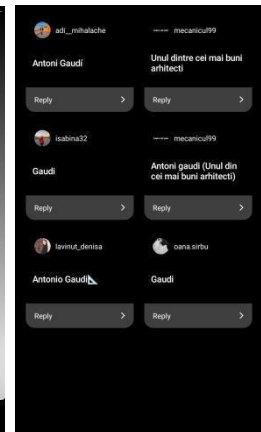
CHALLENGES AND SOLUTIONS

1. CONSISTENCY – posting regularly
   You have to post almost every day to keep up the level of engagement with your followers. It can be a challenge to most people, especially if you are one of those who think Instagram is a waste of time.
   Consistency to post regularly is largely determined by your mindset. Behavioural understanding is key to figuring out the needs of your audience and what to deliver. A calendar myth helps you get going; setting up a post for each day of the week in advance could help your followers see you as active.
   Learning to incorporate the everyday into our life's routines, rituals and rhythms that we don't even acknowledge. Consistency will help you also with learning the app and its features. Motivation to continue is a never-ending quest even for the most skilled Instagram users.

2. INSPIRATION – what to post
   One of the most common beliefs is that you need to have special content created for Instagram. Here are some ways you can find ideas for your posts:
   - everybody likes to see behind-the-scenes, so document your process, and take photos of the things you do before, during, and after your class
   - Share content from your followers
   - Browse other teachers' profiles and see what they do, collaborate and get inspired by them.

   Sometimes it is enough for people to see that you are active. Of course, you can spend a lot of time preparing a story or post to be perfect. However, managing your profile yourself won't leave you with much time to do anything else. So use your time wisely.

3. WORD OF MOUTH – being shared by your audience
   The highest level of engagement is when other people find out about what you do on Instagram from pictures that your followers share. To achieve, you have to involve the participants in your posts, for example: by using catchy hashtags; posting things they did in class and tagging them; commenting and liking things they post and establishing relationships with them on the Instagram medium.
   Another way to get your content across would be to give your students the option to record and post you on their profiles. Sharing this can get a lot of work off your hands and make it more interesting for them.

4. DEPENDENCY – wasting time on Instagram
   There's always the danger of spending too much time on Instagram. It's built to catch your attention and can be very addictive.
   There have to be some limits you set yourself. You can be the get in, post, and get out type. But if this style can help you with your time, it can be depreciating when it comes to the quality of the relationship that people feel you build with them.
   Your health has to be a priority, so if you feel you can't put Instagram away, it's okay to ask for help.

5. VALIDATION - you are not your student
   Everybody is different, so please don't think that you know what your students want just because you want the same thing. The metrics from Instagram can help you better understand what people want.

LIMITATIONS

1. **It's a photo-first app**
   Instagram highlights picture/video—and this is what makes it Instagram. It's as if you have been invited to grab people's attention using visual content. Instagram users expect to see an image, and if they like it, they might proceed to read an accompanying text annotation. If you want engagement, it is through visual content that you have to speak to your audience.

2. **You create and post with your mobile**
   The desktop version of the app is just for browsing. You can't post anything from the computer. We already interact more on the internet through our mobiles, and this is another core limitation of Instagram.

3. **Limited outside links**
   Things taking you away from Instagram are scarce and calculated. You have your bio where you can post a link, e.g., to your website, or links you can post in Stories. In the case of post description, the links you post will not be clickable. Thus, people will have to retype any link from your posts in the browser's address bar. Knowing this myth changes the way you post. In some cases, it keeps you creating content specially for Instagram.

4. **71% of users are under 30**
   There's no product that is used by everybody—and this is normal. Instagram is a tool used by younger people, though this demographic is bound to change over time. From the perpective of teacher-student relationship, it would be helpful to know if your students use Instagram and, if so, how frequently.

COMPATIBILITIES	
Name	Description
Facebook	When you post something on Instagram, you have the option to automatically post it on Facebook. While Stories can be shared across the two platforms, you won't be able to see interaction with the content you share from Instagram to Facebook. More than anything else, these features are meant to attract you to Instagram.
Canva	Canva helps you prepare the content you want to post on Instagram. You have templates and can easily save and store the content as photos on your mobile phone.
Hashtag generators	There are apps that automate your content posting. In this case, hashtag generators, are apps that find popular hashtags for your niche. In 2021, some of these apps are: All Hashtag, RiteTag, and Hashtagify.

ALTERNATIVE	
Name	Details
FACEBOOK	In a way, this is Instagram's predecessor. Facebook remains one of the biggest social media platforms in 2022 used for communication, besides addressing a different target group of people—young and old.
PINTEREST	A different platform focusing on images. Most Pinterest users don't own the content, but rather, they become the curators of images and videos created by others. If Instagram's chief purpose is sharing, Pinterest's main goal would be discovering.
TIKTOK	This social media platform has had one of the fastest growth in recent years, generating many viral trends on the internet featuring different types of content. It has many similar features to Instagram, and some differences in its usage: Gender: 55% male, 45% female; Demographics - the majority of users and creators are younger than 26 years; Algorithm – it uses artificial intelligence rather than user behaviour.

NAME:

Google Drive

LOGO:

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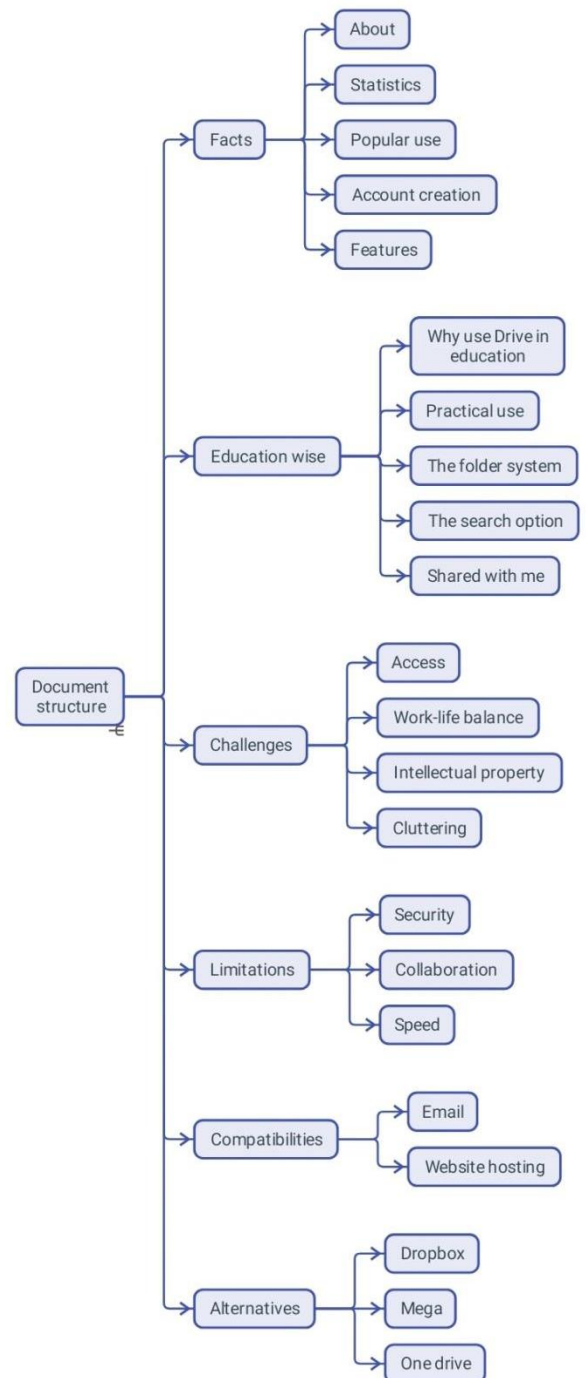
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USEFUL LINKS:

WEBSITE:
https://www.google.com/drive/
PLAY STORE:
https://play.google.com/store/apps/details?id=com.google.android.apps.docs
WIKIPEDIA:
https://en.wikipedia.org/wiki/Google_Drive

ABOUT

Google Drive is a cloud-based storage service that allows users to upload and access files (on Google's servers), synchronize files across devices, and share files. In addition to a web interface, Google Drive offers apps with offline capabilities for Windows and macOS computers and Android and iOS smartphones and tablets. Google Drive encompasses Google Docs, Google Sheets, and Google Slides, as part of the Google Docs Editors office suite that permits collaborative editing of documents, spreadsheets, presentations, drawings, forms, etc. Files created and edited through the Google Docs suite are saved in Google Drive.

STATISTICS

Some interesting stats about this app:

- Used by a billion people worldwide (as per the company statement from 2018)
- Available in 130 countries
- Under the Google Workplace solution, Drive can store: 30GB, 2TB or 5TB of files
- As of May 2017, over two trillion files had been stored on Google Drive.

POPULAR USE

Drive is a cloud storage service and is compatible with most devices. It has emerged as a popular way to store files for personal or professional use.

The basic plan is free and comes with 15GB of storage to use as you please. The paid plans increase the storage space but don't provide more features than the free one. Besides storage, Drive enables the viewing of different types of documents. Editing is also allowed with some limitations.

ACCOUNT CREATION

Drive account is created automatically when you sign-up for Google's email service or a Google account for Android-based smartphones.

You can access Drive in the following ways:

- By downloading the app from Play Store
- Via the Google Chrome web browser
- Via other browsers, from your Gmail account.

FEATURES

Drive has an array of features and functions as a Suite of apps users need. You will find Docs for text documents, Sheets for table data, Forms for surveys, and Slides for presentations. The Drive service is an expansion of Docs and Sheets apps, developed in 2006 and eventually turned into a standalone service with uses such as:

STORING & ORGANIZING

Uploading files to Drive is as simple as dragging and dropping them from your hard drive into the browser window. The service has the option to replace or keep different versions of the same uploaded document.

VIEWING & EDITING

Drive's desktop and app versions allow you to view many types of file formats for text, image, video and audio. It also allows you to edit some of the most well-known file formats, add annotations or notes, and configure access parameters, for example, by selectively permitting different users based on their email addresses. In the case of rich-text documents like Docs, you can track the editing process and monitor all the changes that have been made to a file.

SHARING

When you add a file to your Drive, it is private by default. You may choose to make it public by getting a link for it from the file settings. Another option is configuring restrictive access to a selected few or assigning different privileges.

In addition to Google apps like Docs, Sheets, Forms, etc., which are standalone products and come integrated with Drive, you can find an array of third-party apps that enhance the experience.

EDUCATION

WHY USE DRIVE IN EDUCATION

It is becoming increasingly important to store your files somewhere and have them with you wherever you have internet access. For example, students working on their assignments or homework no longer have to be tied to their desktop every time someone needs access to a file or a course.

Your files are saved and organized in one place and are accessible anytime, anywhere, by anyone you choose. The mobile app can help you do that as well.

Being a general app, Drive is compatible with several other apps, encouraging users to use it in different workflows. Most app developers don't put restrictive guidelines regarding the integration of Drive with the services that they are providing. Thus, knowing the core app well can help you find your way of integrating it into your particular workflow.

At present, Google apps stand to gain the most by integrating Drive and connecting to its features, as it encourages collaboration. Docs, Sheets, and Slides files can all be edited by multiple users simultaneously.

PRACTICAL USE

THE FOLDER SYSTEM

As is the case with working on a computer or in any file cabinet, files are organized in folders with respect to their content, or as per user-defined criteria. In Drive, every file should be assigned to a folder so you can easily keep track of them. You can create a folder in several ways:

- by using the +New button in the upper left corner on the desktop/browser app

- by right-clicking in an empty area of the screen inside the window

- by tapping the '+' button on the lower right corner of the screen on the mobile

One of the first things you do in Drive is to set up the file and folder structure. Like on a hard drive, the file structure has to be well organized to help you easily locate your files.

Being attentive to naming and colour code is very helpful:

- Naming - organizing files in folders can work better if the names are indicative of the files' content or consistent with any other criteria you have defined. Sometimes files come with weird names that need to be changed in line with the content.
- Color code - in addition to naming, files and folders can have different colours that help you track them in your Drive. How you assign colours may have a significant impact on the speed at which you navigate through your document library.

THE SEARCH

Drive is a Google product, and naturally, it is powered by a handy search engine that makes it easy to locate files if you don't remember where you put them.

The search bar lets you search using the following of criteria:
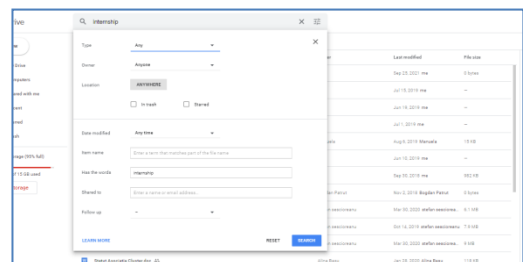
- Keyword: words or groups of letters that are part of the file name

- Extension: the file type

- Owner: the account that created the file

- Date modified: when was the file last modified

You can sort the search results by using some of the same criteria mentioned above: owner, date and size. You can also search for images by what they depict, even if the file name is not indicative of the content.

SHARED WITH ME

This section is for files owned by other accounts and shared with you. Based on the level of access you have to these files, you can:

- View: only see the document
- Comment: view the document and comment on it
- Edit: make changes to the document, organize the file or edit it.

CHALLENGES

1. **Access**
   Sometimes, material designed for different uses or meant to be shared with a different audience can pose logistic problems. Keeping track of the access you give to users can be difficult if you don't have a reliable system in place. Drive gives you different ways to configure and enable access: to some, to all, for a given timeframe, with editing privilege, etc. Using these options in an orderly fashion can help you avoid unintentionally sharing or leaking data.
   Giving access can sometimes mean editing rights. Exercising due care and caution while using the features available here is vital to the overall safety of your material library. In some cases, users who don't have a Google account will not be able to view materials stored on Drive, and this too should be taken into account.
2. **Work-life balance**
   Keeping your life out of your professional work can be hard sometimes. In the case of storage, this can be seen as having personal files in the same place as work-related ones. Going through them, finding something or not sharing private things can be a challenge.
   In this case, it is best to keep separate accounts: one for personal matters and one just for work.
3. **Intellectual property**
4. The files you store on Drive can be viewed by Google without your consent. This is valuable information for the company as it is selling personalized ads. These types of files should ideally stay on your local harddrive.
5. **Cluttering**
   Drive's free account offers a limited amount of space in the free account. The 15GB you have for storage can fill-up quite fast, especially if you store large files like video clips. Moreover, this storage is also used by other Google apps such as GMail. Thus, emails with large attachments will eat away into the remaining space that you have at your disposal on Drive. Third-party services like drivestats.io help you visualize your data to better monitor, organize and clean up your Drive.

LIMITATIONS

1. **Security**
   Files from unknown sources, like some of those shared over Drive, can be infected with viruses. Drive virus scanner only works for files under 100MB. You are duly prompted by Drive before downloading larger files. It is best to scan these types of files after downloading.
2. **Collaboration**
   When used by a large group of people simultaneously, some documents can be harder to track even if users have different privileges. In this regard, you will have to carefully pick the users who can edit/comment and those who can only view the documents.
3. **Speed**
   Low downloading/uploading speeds and latency are a byproduct of the simultaneous use of the platform by millions of users worldwide. It can be problematic when you have bigger files or work with many files at a time.

COMPATIBILITIES

Name	Description
EMAIL	Drive and Gmail are sharing the same storage space.
WEBSITE HOSTING	To host a website online you either have to pay a hosting service or have your own server. Cloud-based storage is great because you can host a website for free on a service like this and Google Drive is a viable option. Even if websites on WordPress or PHP are not compatible you get to benefit from Google's security and are not restricted by any bandwidth limit.

ALTERNATIVES

Name	Description
Dropbox	With less free storage space and faster display of file contents, Dropbox is often seen as a better alternative to Drive, though both apps serve the same purpose.
Mega	The service provided by Mega has the same amount of space in the free plan – 15GB. The files stored here are less secure than on Drive.
One Drive	Produced by Microsoft, this app ranks lower than Drive in many aspects. One of them is the slower web interface. Not logging in for one year will automatically close your account.

NAME:

Zoom

LOGO:

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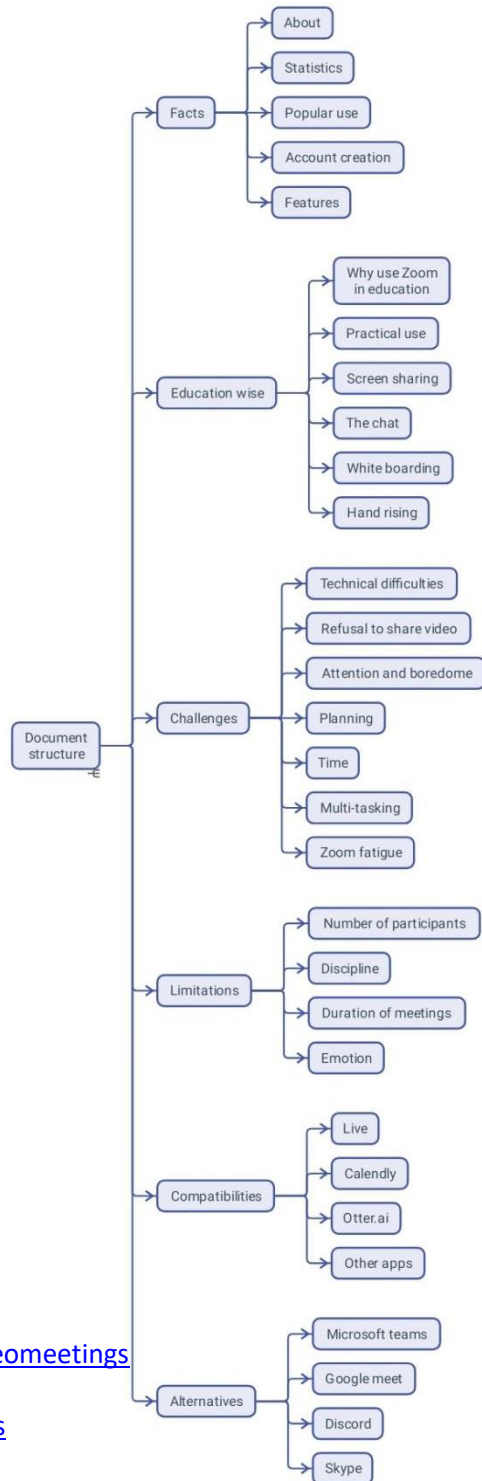
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USEFUL LINKS:

WEBSITE:
https://zoom.us/
PLAY STORE:
https://play.google.com/store/apps/details?id=us.zoom.videomeetings
WIKIPEDIA:
https://en.wikipedia.org/wiki/Zoom_Video_Communications

ABOUT

Zoom is a cloud-based video conferencing platform used for video conferencing meetings, audio conferencing, webinars, meeting recordings, and live chat. Usage is free for video conferences of up to 100 participants at once, with a 40-minute time limit if there are more than two participants. Paid subscriptions with additional features are available for longer or larger conferences.

STATISTICS

Some interesting stats about this app:

- More than 300 million people around the world are using Zoom
- The largest age group to download the Zoom app is between 35 to 49 years old
- Over 90,000 schools used Zoom at the height of the pandemic
- Zoom usage is the highest in companies with 10-50 employees
- Zoom uses anywhere between 540 MB and 1.62 GB per hour, depending on streaming quality.

POPULAR USE

Zoom is being used extensively by different types of users to meet with their colleagues, friends and family. Since the pandemic, schools, trainers, and businesses started migrating some of their activities online via Zoom.

ACCOUNT CREATION

It is not required to have a Zoom account if you only want to join other people's meetings as a participant. If you want to host your own meetings and send invitations, you will have to sign-up for an account. You may also need a Zoom account if you get an invitation to a meeting that is restricted by authentication profiles used by the host. You can create an account by registering with an email address and a password. After confirming your credentials, you can tweak your profile to have access to the software features and organize the meetings you hold.

FEATURES

Zoom offers several features that improve the participants' experience in a group meeting or a presentation: polling, screen sharing, whiteboarding, annotations (or co-annotations), and virtual hand-raising are among the most useful. It is also easy to schedule meetings, set reminders, and record them.

As a host, you can assign permissions and define administrative controls, like enabling a waiting room where the participants are funnelled to after logging in. You can also split your Zoom meeting into breakout rooms with up to 50 separate meeting sessions.

Due to its popularity, various third-party apps have been developed to improve the experience of meeting over Zoom.

Zoom apps are extensions that add to the video conferencing platform's functionality by expanding Zoom's capabilities and taking remote meetings to the next level. These extensions save time, increase impact, and help remote workers become even more efficient with minimal effort.

WHY USE ZOOM IN EDUCATION

Initially, Zoom wasn't an app designed for teaching. It was created to provide a simple, more direct way of communicating over the internet for two or more people at a time. Also, this app was not the first or the only video calling software on the market. However, certain circumstances have pushed it ahead of the competition and made it even more popular.

Education, being one of the branches of human development particularly crippled by the pandemic, was seen by the team at Zoom as an opportunity. Thus, the software features were adapted to address the needs of the teacher-student relationship.

Remote education conducted over digital tools like Zoom might feel a bit alienating at first, as you:

- sit in front of a computer/device
- use a camera and microphone to communicate with others
- meet each other virtually on a screen.

These new behavioural changes can be reminiscent of familiar situations like sitting in a classroom, being more aware of your body, and interacting differently with people. While the limitations of communicating over Zoom pose a challenge to the humane side of education, adapting to digital transformation also opens a new discipline that a contemporary educator needs to address. It is bound to shake up the vocational core of teaching as it is shaping up after the pandemic.

PRACTICAL USE

Zoom meetings or sessions are shared as weblinks, accessible either in a web browser or in the Zoom app installed on your device.

Sessions can be secured with a password or left open, but new participants that join first arrive in a 'waiting room'. This place is limbo without any audio or video. The session host can opt to let the participant in or not. Once they enter the meeting, they can view, listen, talk and interact with the other participants.
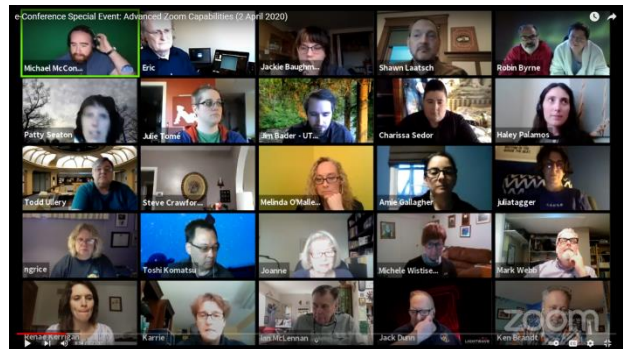
Every participant will appear in a small window alongside their name. If a participant's webcam is not shared, a small black window with the participant's name will be visible instead.

There is no "one size fits all" approach to using Zoom in remote meetings. Some of the most popular utilities in Zoom are as follows:

Screen Share – a feature that displays to the other participants the screen information of the device with which you have logged on to Zoom. It is helpful when you want to deliver PowerPoint-like presentations or demonstrate how you work on something using your device.

Chat – Zoom provides a chat that allows its users to communicate more efficiently during meetings without disturbing the other participants. Messages can be broadcast to the whole group or sent privately. The Chat window also serves as a sidebar to share links and additional resources.

Whiteboard – a tool for visual note-taking that is visible to all participants. It is particularly effective in theoretical classes where students may need visual aids to follow along. You can use it to make drawings, write text, erase, undo/redo and save. It is located right under the Share Screen button at the bottom of the Zoom window. It works best with a graphics tablet (if you are on the PC) or with a digital pen paired with your phone or tablet device.

Virtual hand-raising – a tool to graphically signal to the host and other participants that someone wants to say something.

It is also easy to schedule meetings, set reminders, and record them.

As a host, you can assign permissions and define administrative controls, like enabling a waiting room where the participants are funnelled to after logging in. You can also split your Zoom meeting into breakout rooms with up to 50 separate meeting sessions.

1. **TECHNICAL DIFFICULTIES**
   A good internet connection is crucial to avoiding technical glitches in video conferences. Generally speaking, lower upload speeds negatively impact the quality of virtual meetings. However, good bandwidth alone does not protect you from having problems while video conferencing. Misconfigured webcams or microphones can also lead to a faulty experience while you are in an online meeting. Testing ahead of time, relocating, and asking participants to log in from a well-configured device could help resolve some of these issues.

2. **UNWILLINGNESS TO SHARE VIDEO**
   Participants who do not want to show their faces could make you feel like talking to a black wall. Instead of forcing them to turn on their cameras and aggravating their anxiety, you can see this behaviour as an opportunity. Thinking of something in your course that might encourage participants to engage visually could lead to a solution. For instance, the Virtual Background feature in Zoom has been thoughtfully developed for participants who are not comfortable with visually sharing their personal space.

3. **ATTENTION AND BOREDOM**
   Remaining present and alert throughout a meeting can be a challenge to some. Participants do get bored sometimes when a class isn't so engaging. It is not unusual, so you should be prepared for such a scenario; but first, you have to learn to recognize and acknowledge it. There are apps, like Hypersay, that can be used alongside Zoom to "distract the distracted" through engagement and interaction.

4. **PLANNING**
   Planning your meeting is as important, if not more important, over the internet as it is face to face. Knowing the features of Zoom can help but knowing your audience can help even more. Having an agenda for a meeting is good; sharing this agenda with participants, if you call on them for specific tasks, is even better.

5. **TIME**
   Rushing participants might cause some to fall behind, not complete tasks and miss understanding what to do next or at home. Also, dragging could prove less engaging for some. Keep in mind that everything takes longer in online meetings. While planning your meeting, it is important to estimate the time required for different tasks.

6. **MULTI-TASKING**
   There are several things that you have to manage at the same time. It is alright to ask for help if something appears overwhelming. You could ask a tech-savvy assistant to take care of things you will need during a remote session. It might free your attention to engage more with your

audience. Zoom has a co-hosting feature that you could use. Remember to test and assure yourself that the other person understands what they need to do.

7. **ZOOM FATIGUE**

In the event of a pandemic, when you are required to work online, attend classes or meet friends virtually, the time you spend connected can leave a mark on you. Having regular breaks is as important as the time you spend in meetings so you can recharge and perform better.

LIMITATIONS

1. **NUMBER OF PARTICIPANTS**

The basic paid plan can host up to 100 participants. An upgraded business subscription allows you to host meetings with up to 300 or 1000 participants.

2. **DISCIPLINE**

As the number of participants in a Zoom session grows, it can become more challenging to perform some tasks, and the meeting can be harder to moderate. Thus, the need for clear instructions becomes paramount.

3. **DURATION OF MEETINGS**

In the free version, you get only 40 minutes in meetings with more than 2 participants. The session ends automatically when the 40 minutes run out. In this event, the host and the participants can rejoin the meeting by clicking on the link again. Signing up for the paid version prolongs the meeting time by setting no limits to the duration.

4. **EMOTION**

When we speak and meet people face-to-face, we learn much about what they think or how they react from their body language, facial expressions and voice tonality.

But body language also helps the brain remember these interactions by attaching emotion to them. In a virtual setting, as we receive far less information, there appears to be much less emotion for us to decode the intention of others and solidify memories. The result is that we don't remember as much from virtual meetings.

COMPATIBILITIES

NAME	DESCRIPTION
LIVE	Helps broadcast meetings live on social media channels. Making your meetings public like that can help you reach a bigger audience, collect questions and feedback from them and engage in different ways.
Calendly.com	This app helps schedule your remote sessions. It works best for one-on-one meetings and lets your participants pick a time that you have set as an interval in advance to meet with you. Once the connection between the two apps is synced it will automatically create the meetings in your zoom app.
Otter.ai	This app transcribes the audio recording of your meeting so you can browse through it faster if you need to revisit your Zoom meeting.
3rd party apps	**Google Drive** The Google Drive extension for Zoom allows meeting organisers to automatically upload meeting recordings and transcripts to folders. **Trello** The Trello app enables meeting hosts and participants to connect to and organise Trello boards from within Zoom meetings. Attendees can also add comments and import content onto the board via the Zoom chat channel. **Gmail** The Gmail extension allows users to schedule, start, view, and change Zoom meetings without exiting the inbox.

ALTERNATIVES

NAME	DESCRIPTION
Microsoft Teams	Microsoft Teams is cloud-based team collaboration software that is part of the Microsoft 365 and Office 365 suite of applications. The core capabilities in Microsoft Teams include business messaging, calling, video meetings and file sharing.
Google Meet	This is a video-communication service developed by Google. It is one of two apps that constitute the replacement for Google Hangouts, the other being

	Google Chat.
Discord	Discord is a VoIP, instant messaging and digital distribution platform. Users communicate with voice calls, video calls, text messaging, media and files in private chats or as part of communities called "servers". A server is a collection of persistent chat rooms and voice chat channels which can be accessed via invite links.
Skype	A proprietary telecommunications application operated by Skype Technologies, a division of Microsoft, best known for VoIP-based video telephony, videoconferencing and voice calls. It also has instant messaging, file transfer, debit-based calls to landline and mobile telephones (over traditional telephone networks), and other features. Skype is available on various desktop, mobile, and video game console platforms.

NAME:

Trello

LOGO:

HOW TO READ THIS DOCUMENT:

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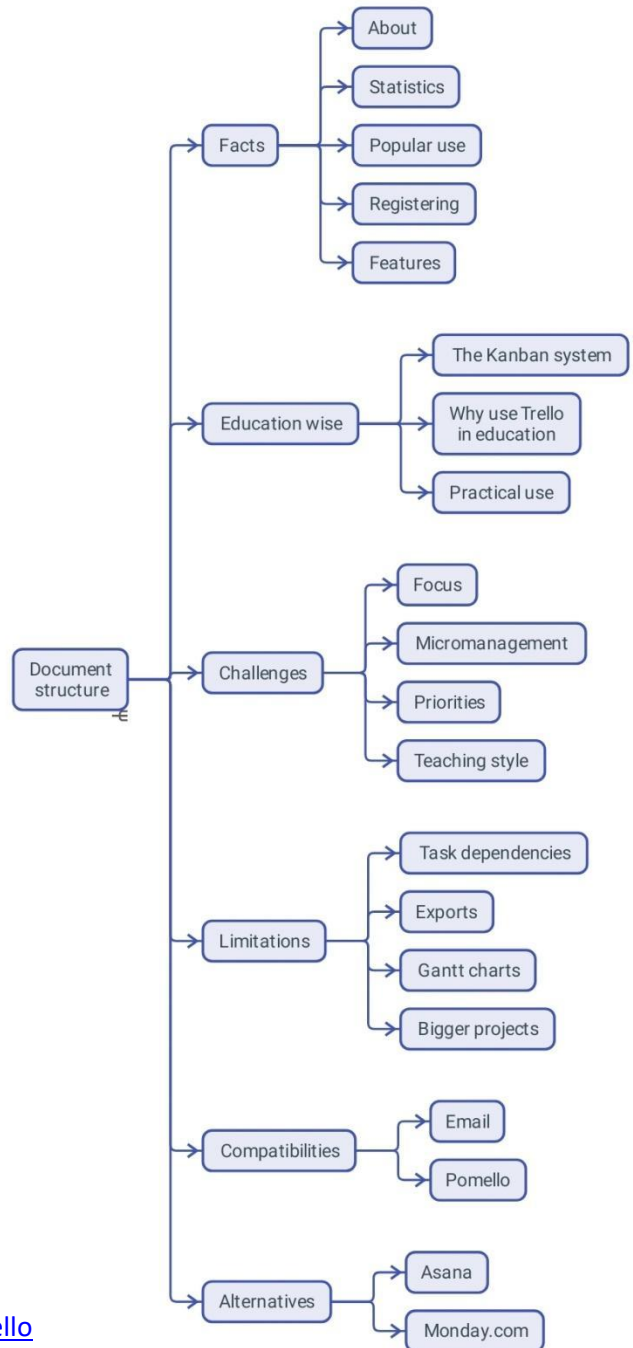We have analyzed five more online software whose reports are available on our website: www.trendss.eu

USEFUL LINKS:

WEBSITE:
https://trello.com/
PLAY STORE:
https://play.google.com/store/apps/details?id=com.trello
WIKIPEDIA:
https://en.wikipedia.org/wiki/Trello

ABOUT

Trello is a web-based service in the shape of a collaborative tool you can use to organize and manage your projects. Paired with the app, Trello enables you to access these projects anywhere.

STATISTICS

- Founded in 2011
- Forbes considered it among the *10 Hot Startups in NYC* in 2016
- Atlassian acquired Trello for $425 million in 2017
- Trello had 50 million users, with 1 million active teams, in 2019 and grew at an average of 150,000 new users weekly.

POPULAR USE

Trello could be used for personal and business purposes, including real estate management, software project management, accounting, web design, gaming, and law office case management. It has also been used to manage school bulletin boards and plan lessons before and after the pandemic, mindful of the impact of 'social distancing'.

REGISTERING

The Trello website invites you to sign up for free with your email address. You can start using the software after successfully verifying your email.

FEATURES

WORKSPACE

A group of boards on a given user-defined topic. A workspace has a name that can be easily edited and may contain several boards.

BOARD

What we call a Project is, practically, a group of lists. These lists are organized in different ways.

LISTS & TASKS

After opening a workspace, you will see a couple of lists created already. Look out for the *Add List* button. Lists are ways of stacking tasks one above the other. Lists can play a fluid role in a workflow. In some workflows, a list can signify the state of its stacked tasks. For example, a list named 'To Do' may convey the status of the enumerated tasks that are not yet finished.

EDUCATION WISE

THE KANBAN SYSTEM
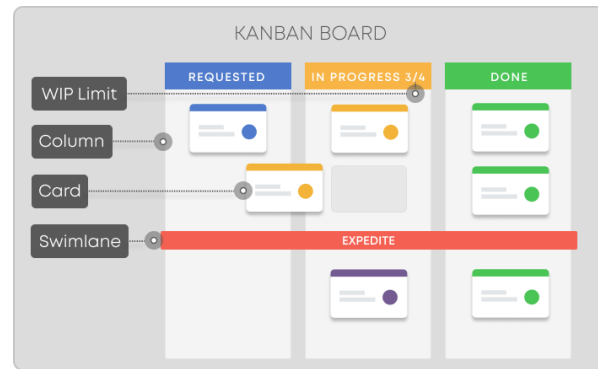
Kanban is a workflow management system for defining, managing and improving services that deliver knowledge. It aims to help you visualize your work, maximize efficiency, and improve continuously.

Initially, it arose as a scheduling system for lean manufacturing, originating from the Toyota Production System (TPS) in the late 1940s. Much later, at the onset of the 21st century, some key players in the software industry quickly realized how the Kanban system could positively change the way products and services are delivered.

The Japanese word *kanban* means visual board or sign.

WHY USE TRELLO IN EDUCATION

The simple Kanban-like system of Trello can help you manage a complex workflow, keeping all of your ideas and tasks in the same place. When we talk about workflow, we think of order, control and process.

This way of organizing information allows you to dive into the details while, at the same time, keeping an eye on the bigger picture.

Depending on how you choose to use Trello, you have a couple of options:

- internally - for yourself and keeping track of things you have to do as an educator.
- externally - to mediate a relationship between you and your students.

PRACTICAL USE

It is a step by step process. You create a workspace, a board and some cards, and start detailing every card. For instance, the workspace could be a year; the board might be groups of tasks to be done, or classes or type of students you work with; tiles could be individual tasks you have to complete or individual students. Every card can hold data about that particular task or student.

CHALLENGES

1. **FOCUS**

    Despite the ease of generating ideas and tasks, the Kanban system can be a challenge when it comes to setting dates for things. Plumbing through the nitty-gritty of general tasks that you have set up might seem like tumbling down a rabbit hole. There is a saying: "*Done not perfect*", which you could keep in mind. It is better to finish the task you started before moving on to the next one.

2. **MICROMANAGEMENT**

    It can be hard not to try to control everything when working with teams or even giving yourself things to do. Every project has a level of detail beyond which everything moves slower or even breaks down. For some projects, you don't have to track everything and will not need all the features of Trello.

3. **PRIORITIES**

    At times, when a lack of focus arises, prioritization could help keep things in check. Prioritizing in Trello can be as easy as moving a tile up a stack. One can also prioritize tasks by criteria, but they may differ from educator to educator.

4. **TEACHING STYLE**

    You can adapt Trello to your teaching style and even improve the latter. The inherent challenge is that you might notice some things that don't work and require further tweaking. Changing something you did for years might be scary at first, but change is inevitable.

LIMITATIONS

1. **TASK DEPENDENCIES**
   Trello does not provide a method for tracking task dependencies.
2. **EXPORTS**
   You need data when using other software for tracking projects. In this case, you cannot export a project from Trello and use it in other programs like MS Project.
3. **NO GANTT**
   The Kanban system is different from the Gantt charts. Many people are used to Gantts and will miss them in Trello.
4. **MATRIOSKA**
   The most apparent thing in Trello and the one that gives it its unique approach is maybe the one that poses the most restrictions. You won't be able to create a tile outside a board or a board outside a workspace; this may become a problem in larger projects.

COMPATIBILITIES

Name	Description
Email	You can send emails to Trello boards by finding and copying the email address of the board. You can then paste it into your email sender box. After sending it, you will find the content of your email on the Trello board. Also, you can reply directly in your email to messages in Trello.
Pomello	A Chrome extension that resolves Trello's lack of time tracking features by displaying the remaining time you have left for completing a task.

ALTERNATIVES

Name	Description
ASANA	A web and mobile work management platform designed to help teams organize, track, and manage their work.
Monday.com	A cloud-based platform that allows users to create their own applications and work management software.

NAME:

Mural

LOGO:

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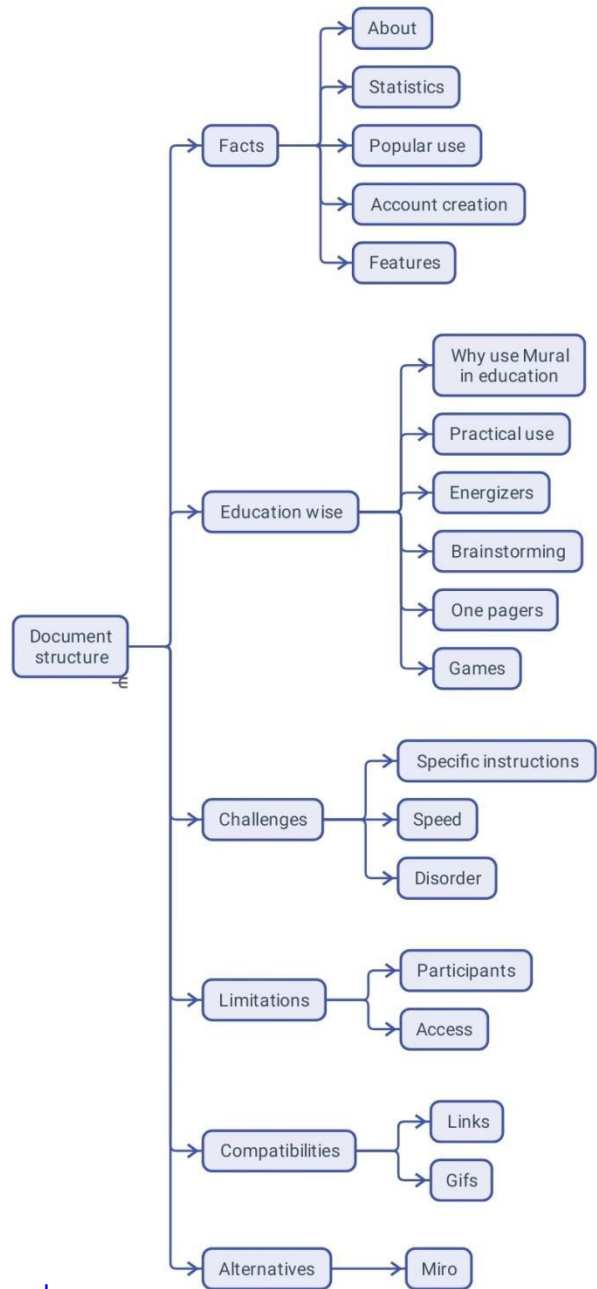We have analysed five more online software whose reports are available on our website: www.trendss.eu

USEFUL LINKS:

WEBSITE:
https://mural.co/
PLAY STORE:
https://play.google.com/store/apps/details?id=com.mural
OTHER:
https://linktr.ee/mural_app

ABOUT

MURAL is a cloud-based collaborative whiteboard platform that can help you organize, visualize and share information.

STATISTICS

Some interesting stats about this app:

- Students and teachers from over 4,000 schools and universities collaborate with MURAL
- Trusted by over 95% of Fortune 100 companies
- January 2021: Credit Suisse named MURAL a 2021 Disruptive Technology Award Winner
- In 2010, MURAL closed a $118 million Series B funding round
- In 2021, the company had a valuation of $2 billion
- The MURAL template library, available at mural.co/templates, contains 300+ templates—i.e., methods built for everything from icebreakers (a few seen above) to Agile ceremonies, OKRs, brainstorming, and more.

POPULAR USE

Initially used as a brainstorming tool in the IT and advertising industries, it builds on the design thinking process and mindset developed at IDEO by David and Tom Kelley.
Collaboration, speed and inclusiveness are amongst the most valuable features of MURAL that help companies in the rapid prototyping of products and services. The startup community, in particular, loves these types of tools for their versatility and ease of use.
MURAL is particularly useful in narrowing down problems and finding different solutions, but there are many other ways to use this software.

ACCOUNT CREATION

You have to register if you want to create boards. Joining other people's boards will not require you to create an account.
You create an account by registering and picking a password. After verifying your credentials, you can begin creating different canvases.

FEATURES

At first glance, MURAL looks like a whiteboard where you can stick all kinds of visual notes and move them around. Under the hood of simplicity, there lies a structure for you to manage and easily find different boards for different projects. The boards are organised in shareable folders and workspaces, which enable other people to contribute as team members or view them as visitors.

EDUCATION WISE

WHY USE MURAL IN EDUCATION

From the meeting sessions in the marketing departments of start-ups to classrooms can be just a small step. This happens with MURAL, as it does with many apps, in the wake of the pandemic, gaining interest in the education sector by being a place where people can interact. Quite simply, this service takes the whiteboard and puts it online.

As an educator, you can monitor your students' activity over the board. You can have both the detailed view of something from the board as well as the bigger picture when you zoom out.

Course creation can be one of the ways you can hack MURAL and use it for education. It's one of the easiest tools out there to put text and image together and make someone want to read about it.

PRACTICAL USE

The structure of a board is limited only by the creator's imagination. Below you can see different ways of organizing information into valuable knowledge where participants can learn about each other and different topics.

This work is coupled with communication via a Zoom video remote session, but it can equally be associated with any phone call conversation.

ENERGIZERS

Working together on the same board can be fun. Sometimes simple games can help participants de-stress and learn things about each other that they would otherwise find out in a course. In this example, you can see how participants posted pictures of their favourite dish.

BRAINSTORMING

Finding a new idea or common ground can be demanding in a predominantly online workspace. Brainstorming is a step in many projects, and MURAL helps put together information for this process to have results. In this example, you can see how brainstorming for a logo could be.

THE ONE PAGER

When dealing with a new or complex topic or project, it's important to illustrate it in simple terms, sometimes on a page. Visuals help a lot, and you can structure everything to be easily viewed and understood by all the participants. It might mean putting together different types of information beforehand. The connection between everything becomes very important. You can see it as a big infographic. In this example, we added information from the TRENDSS project, so we may refer to this document whenever we need the information. First, we gave the project a header and talked about the teams in the organization.

EXPLORATION GAMES

The MURAL environment can be used to structure information in a game-like fashion. This example serves as an illustration of Gamification (for gamers) in a few simple steps:

- First, you pick an avatar
- Then you move it around different places on the MURAL board
- There you can discover various bits of knowledge
- And you can win rewards along the way.
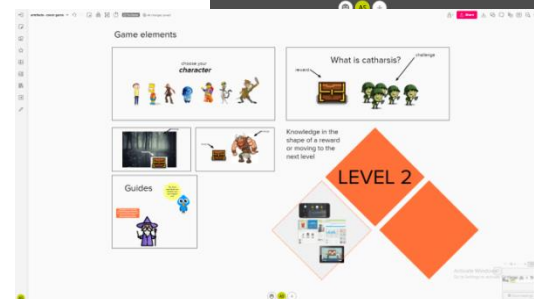
Gamification helps companies enhance their experiences by using information that the gamers are familiar with, besides gathering information on how some of these gaming principles are employed.

CHALLENGES

1. **SPECIFIC INSTRUCTIONS**
   It is worthwhile to give clear information to users about what they should or should not do as they enter and work in MURAL. Users might be at different levels of acquaintance with the software, so your pacing should take this into consideration.

2. **SPEED**
   If some of your participants are not familiar with the app, or if they are not attentive or are lagging behind, it can affect the flow of your exercise. Being aware of the differences will help you deliver a good experience for all or most of your participants.

3. **DISORDER**
   If you want the content to be as aligned as possible on the canvas, it is best to have patience and low expectations with your participants when asking them to keep the alignment. Not all participants will understand your need for order. Find joy in the chaos that can happen in collaboration.

LIMITATIONS

1. **NUMBER OF PARTICIPANTS**
   Depending on the exercise, the number of participants might be harder to control after a point. Preparing a list of simple tasks to perform would help in this case.
2. **ACCESS**
   Participants in your MURAL canvas can have different levels of interaction. They can be either members of your team or visitor. Be mindful of this while assigning permissions to edit your canvas lest you lose your work through any mishap. When you give access to edit but don't want parts of your board to be changed, you have the possibility to lock them. Locked items are not open to edits from any user interacting with the canvas.

COMPATIBILITIES

NAME	DESCRIPTION
LINKS	Links to videos and blog posts, including YouTube or Pinterest, are rendered by MURAL in a clear way. A link pasted directly into a MURAL canvas will show a thumbnail, a title and a description of the given web location.
GIFs	You can post GIFs on a MURAL canvas and watch them animate. You may use drag-and-drop for files located on your computer/device, or you can paste a link to a GIF from the web.

ALTERNATIVES

NAME	DESCRIPTION
Miro	Software as a Service (SaaS) application with real-time, collaborative whiteboard features. The service is hosted on miro.com, a project that began in 2012.

NAME:

Kahoot!

LOGO:

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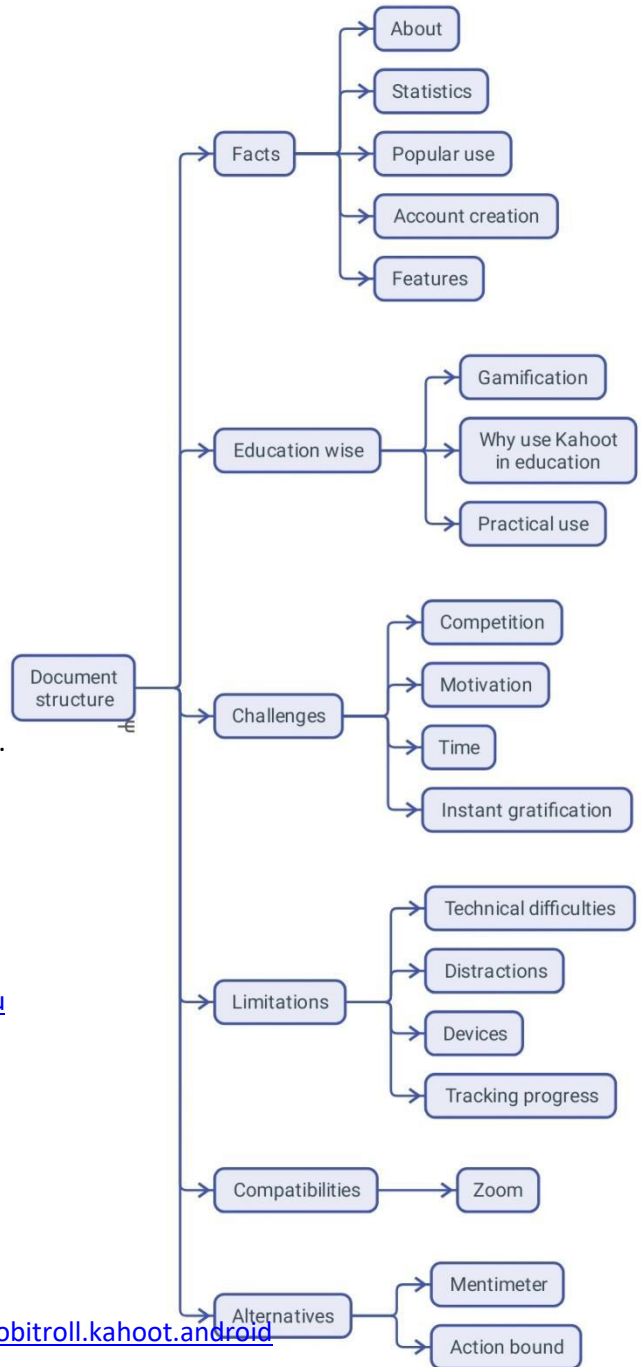
We have analysed five more online software whose reports are available on our website: www.trendss.eu

USEFUL LINKS:

WEBSITE:
https://kahoot.com/
PLAY STORE:
https://play.google.com/store/apps/details?id=no.mobitroll.kahoot.android
WIKIPEDIA:
https://en.wikipedia.org/wiki/Kahoot!

ABOUT

Kahoot is an online game-based learning platform. It allows teachers, organizations and parents to set up fun web-based learning for others.

STATISTICS

Some interesting stats about this app:

- Reached 1 billion players in 2017
- Valued at $300 million in 2018

POPULAR USE

Kahoot is used in education however the concept behind it comes from outside education and has more to do with motivation than learning. This concept is called Gamification and has gained popularity in fields like marketing and computer science. Kahoot is now the benchmark for interactive quizzes and lessons. The idea behind creating this software was to transform the regular classroom into a game show, with the teacher being the host and the children contenders. The use of mobile devices like smartphones and tablets is not only allowed but encouraged, thus, welcoming technology in a meaningful way into the classroom.

ACCOUNT CREATION

An account is only needed if you want to create Kahoots. You can register and pick from 4 types of accounts: teacher, student, personal, and professional. Each of these accounts will need further details for a better experience. You will have to provide credentials and an email address that you will have to confirm. You don't need to create an account or log in to participate in games created by other users; you just need to access the Kahoot website from a web browser and enter a pin. It is even simpler if you have a mobile app. You open it and enter the pin. This pin is a unique 6-digit number that connects you to the game.

FEATURES

Kahoots are the games you create and play using this software for the participants in your training.

GAMIFICATION

Gamification is the strategic attempt to enhance systems, services, organizations, and activities to create similar experiences to those experienced when playing games to motivate and engage users.

It is achieved through techniques like:

- Offering rewards for doing given tasks
- Fostering competition between players
- Using meaningful challenges, narratives, etc.

In 2010, when the term Gamification first gained widespread use, it had a more specific connotation that referred to incorporating social and rewards-based aspects of games into the software. In marketing, Gamification is most used in customer loyalty programs like Brandification and customer engagement, for example, motivating users to perform different tasks when visiting a website.

Education and training are areas that have generated much interest in Gamification.

WHY USE KAHOOT IN EDUCATION

Learning through play enables participants to learn differently. Some would say this way of learning is the first one we experience and is better than the traditional and more structured way we find in most schools.

Most young people pick up the habit of playing video games and are already acquainted with most game dynamics, mechanics, and components. The beauty of these components is that you can recreate them without having to know how to code or grapple with complex computing instructions.

It's enough to understand that games shape the behaviour of the players.

PRACTICAL USE

KAHOOTS

1. **COMPETITION**

   In multiplayer games like Kahoot, players gather points, and you can win a top spot at the end (1st, 2nd or 3rd place). In some cases, competition may lead to lower self-esteem because 90% of your participants don't get recognized. Lack of recognition, which is a positive motivator, may lead to experiencing fear and anxiety—fear that they will disappoint you. In many cases, healthy competition would have a good impact on behaviour. Monitor its impact, get feedback and improve the experience.

2. **MOTIVATION**

   Kahoot can fill in the place of a motivator, though it will be an external one.
   Engagement will not last, so the idea is to build internal motivation in your students.
   Exposing participants driven by an internal motivation to an environment based on elements of external motivation, like points and rewards, may have an adverse impact.
   Participants may lose their internal motivation and rely on external incentives to do things. One of the responsibilities of the facilitators is to guide the participants and help them internalize motivation.

3. **TIME**

   The process of internalizing motivation, if it is not present already, takes a long time. It is easy to create Kahoots, but beware that this will not replace the internal motivation of participants to learn in the long run.

4. **INSTANT GRATIFICATION**

   When working with highly engaging content like games, the type of engagement you provide should offer something new or worthwhile and be strong enough to compete with other similar stimuli. Piercing the armour of numbness will be easier if you take the time to know your audience and find out their preferred content, what they are familiar with and what intrigues them.

LIMITATIONS

1. **TECHNICAL DIFFICULTIES**

   Some participants may have problems with their devices, resulting in lagging behind and not being able to enjoy the whole experience. As is true for all technology-based events, it is best to test ahead of time so that the participants have everything they need.

2. **DISTRACTION**

   Background music or other features of Kahoot might distract participants from the goal of completing the tasks. You have the option of turning it off for people to focus better.

3. **DEVICES**

   You will need two devices to test if everything is alright with the Kahoots you create. One is the laptop, and the other is the smartphone or device you connect as a participant.

4. **TRACKING PROGRESS**

Tracking is an important step of the evaluation process.

COMPATIBILITIES	
NAME	**DESCRIPTION**
ZOOM	You can host quizzes and polls directly within a Zoom meeting by using the Kahoot version inside Zoom. There's no need for a second screen or device, and you may choose from the Kahoots you have previously created.

ALTERNATIVES	
NAME	**DESCRIPTION**
Mentimeter	The app also focuses on online collaboration for the education sector allowing students or public members to answer questions anonymously. It enables users to share knowledge and real-time feedback on mobile with presentations, polls or brainstorming sessions in classes, meetings, gatherings, conferences and other group activities.
Action Bound	Launched in 2012, Actionbound is a serious game that allows users to create digital treasure hunts, mobile adventures, and interactive guides and make them publicly or exclusively available to an audience. The Actionbound app is available for Android and iOS-based mobile devices.