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Ministry of Labor and Skills

CAPACITY BUILDING TRAINING FOR TVT TRAINERS ON INNOVATIVE PEDAGOGY AND DIGITAL INTEGRATION

PART II: DIGITAL INTEGRATION

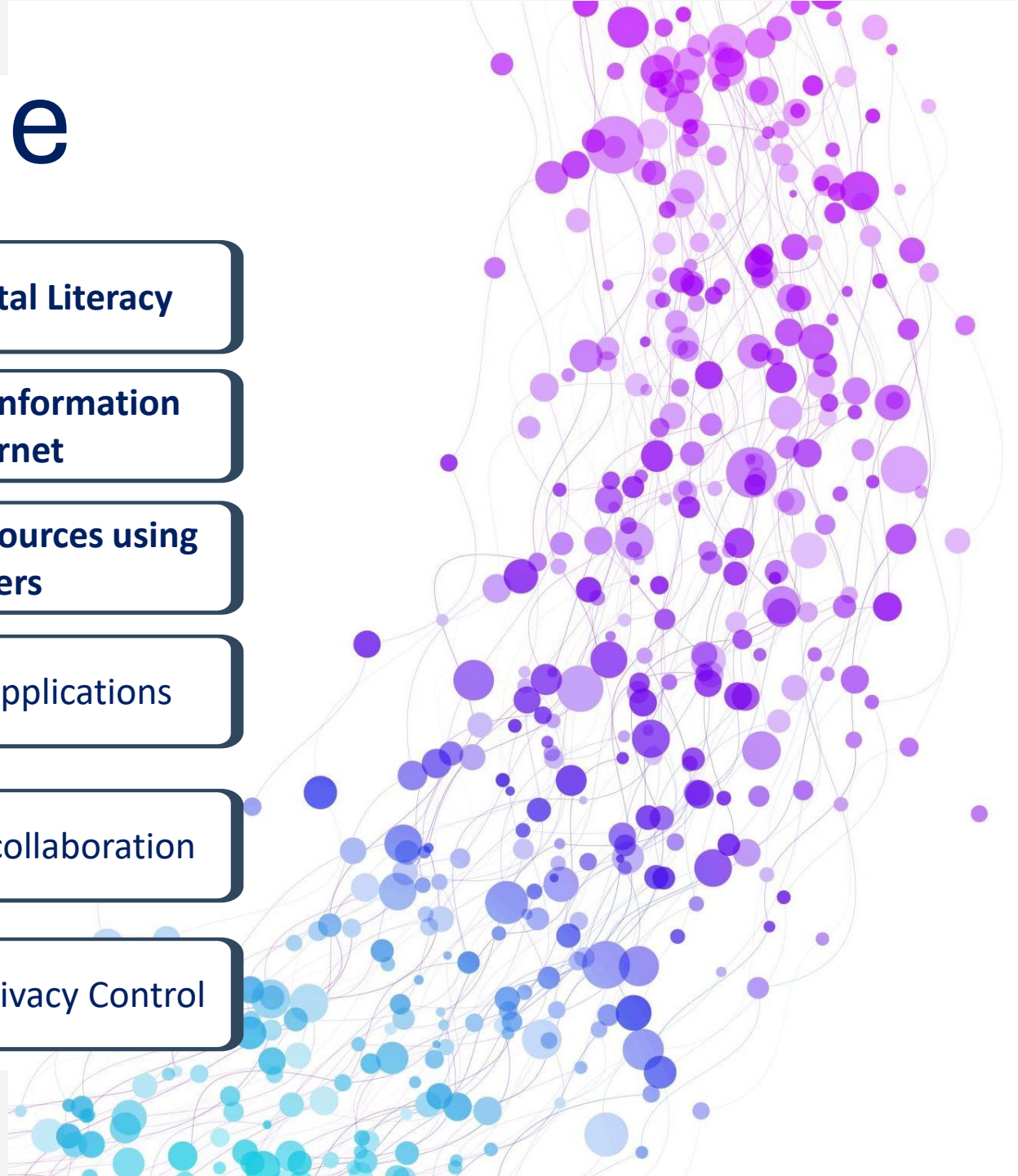
August 2024

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FDRE TECHNICAL & VOCATIONAL TRAINING INSTITUTE

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Entrepreneurship Development Institute®

Outline

1. **Introduction to Digital Literacy**
2. **Accessing Relevant Information over the Internet**
3. **Managing Online Resources using Web Browsers**
4. Using productivity Applications
5. Communication and collaboration
6. Online Security and Privacy Control



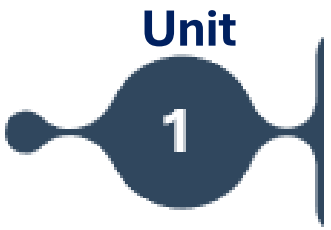
UNIT 1 Digital Literacy and Technology Integration

At the end of this unit trainees are expected to:



- Understand the foundational concepts of digital literacy
- Access, evaluate, and manage online information effectively to enhance teaching and learning processes.
- Utilize productivity applications and digital tools for content creation, collaboration, and communication in educational settings.
- Implement online security measures and privacy controls to protect personal and institutional data





Introduction to Digital Literacy



Discussion Questions

- What does digital literacy mean to You?
- What competencies and digital skills are essential for Trainers?

- ***Digital literacy refers to the ability to effectively use digital devices, communication tools, and networks to access, manage, integrate, evaluate, and create information in various formats.***

- Digital literacy is an essential skill in the 21st century
  - It empowers individuals to engage with the increasingly digital world effectively.
  - It encompasses a wide range of skills, from basic computer knowledge to advanced information processing.

1.2. Key Competencies Needed for Trainers



To be digitally literate, trainers must develop several key competencies that enable them to use digital tools and resources effectively. These competencies inclu

1 Technical Proficiency

- Basic Computer Skills
- Software and Applications
- Internet and Browsers Navigating

2 Information Literacy

- Information Retrieval
- Information Evaluation
- Managing Digital Information

3 Communication and Collaboration

- Digital Communication Tools
- Collaborative Platforms
- Etiquette

1.2. Key Competencies Needed for Trainers

4 Digital Content Creation

- Multimedia Integration
- Educational Technology Tools

5 Ethical and Responsible Use

- Digital Citizenship
- Netiquette
- Plagiarism and Copyright

6 Problem-Solving and Critical Thinking

- Troubleshooting
- Critical Thinking

7 Continuous Learning and Adaptability

- Staying Updated
- Professional Development



Unit 2

Accessing Relevant Information over the Internet



Discussion Questions

- Discuss the difference between the Internet and the World Wide Web.
- What is the difference between a search engine and a web Browser?
- Mention different examples of search engines and web browsers you use.
- What specific Searching strategies and techniques you use ?



- The Internet provides the infrastructure and the means for devices to connect and communicate globally
- The WWW offers a user-friendly and visually appealing way to access and interact with the vast array of information available on the Internet
- Together, they have transformed the way we work, learn, socialize, and entertain ourselves in the digital age, making the world a more connected and information-rich place.

The Internet:



- The Internet is the global network of interconnected computers and devices, allowing them to communicate and exchange data with each other (Marek & Yanchun , 2023).



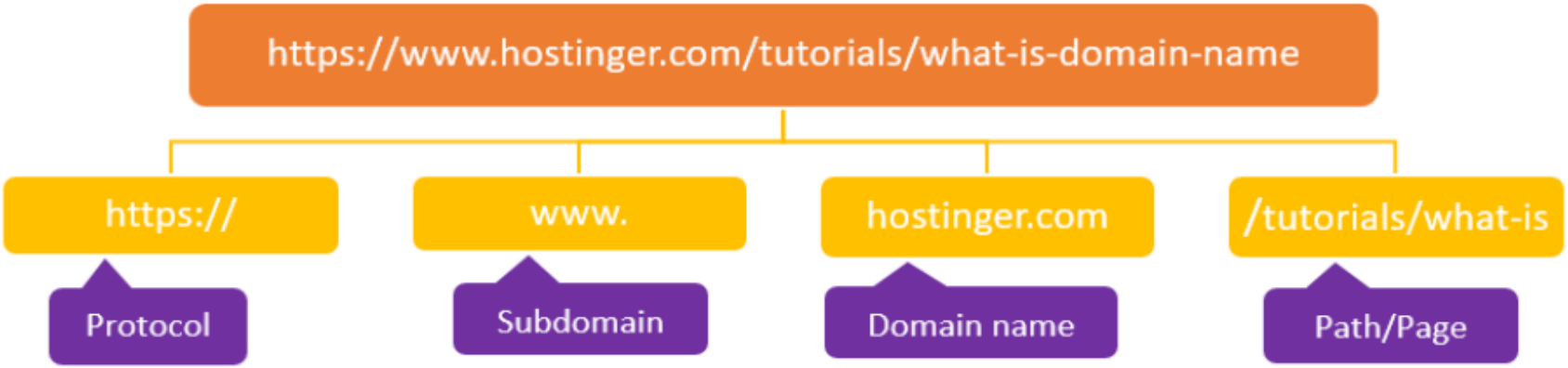
The World Wide Web (WWW):

- It is a vast collection of interconnected documents and multimedia content, accessible through web browsers.

URL:

- **“URL”** : Stands for **Uniform Resource Locator**.
- A **unique address** for each web page on the Web
- When you want to visit a specific web page, you can enter its URL into the address field in a web browser.

The URL consists of :





- **A web browser is a software application that allows users to access and interact with content on the World Wide Web (WWW).**
- It serves as a user interface for navigating the Internet, retrieving web pages, search for information, view text and images, watch videos, and interact with web-based forms and services.



- **"Search for Information" refers to the process of actively seeking and retrieving specific data, facts, or knowledge from various sources, often utilizing search engines or databases**
  - The ability to conduct effective and critical searches is paramount for TVET trainers in their quest to find **relevant and reliable information for their teaching materials.**
  - By mastering search techniques, trainers can efficiently locate high-quality resources, **evaluate their credibility**, and **integrate them into their curriculum and TTLMs**.

Search engine

- **A search engine is a software system embedded in a website that is used to search for information on the World Wide Web**
- The search results are generally presented in a line of results, often referred to as **search engine results pages.**
- **The information may be a mix of web pages, images, videos, infographics, articles, research papers, and other types of files**
  - You can search the web using a single word or a phrase.
  - An online search can generate millions of results on hundreds or even thousands of web pages.
  - The search results are usually presented as a list and are often called **hits**.

Popular Search Engines



Key Functions of Search Engines

Keyword Search: Users type in words or phrases to find relevant web pages

Advanced Search: Offers options to refine search queries with filters for date, language, region, and more

Image and Video Search: Allows users to find images and videos related to their queries

Voice Search: Enables users to perform searches using voice commands, which is especially useful on mobile devices

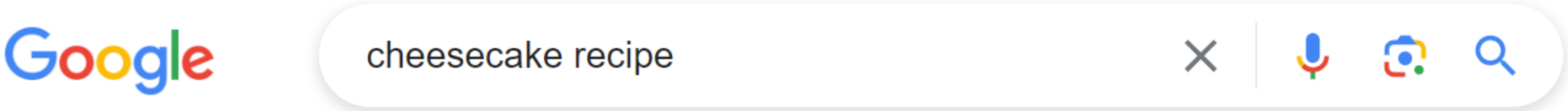
Local Search: Helps users find businesses, services, and points of interest in their local area



- The search results that a given search will generate is largely dependent on the search word used.
  - **The more exact you can be in your choice of word(s) the more accurate the search results.**
  - Google offers a range of searching strategies and techniques to help users find relevant information.

1. Basic Search:

- A search can be conducted by entering a single search term or a phrase comprising more than one term.
- Keyword search is the simplest form of search, facility offered by a search system.
- For example, you can search for "Cheese cake recipe" to find recipes for making cheese cake.

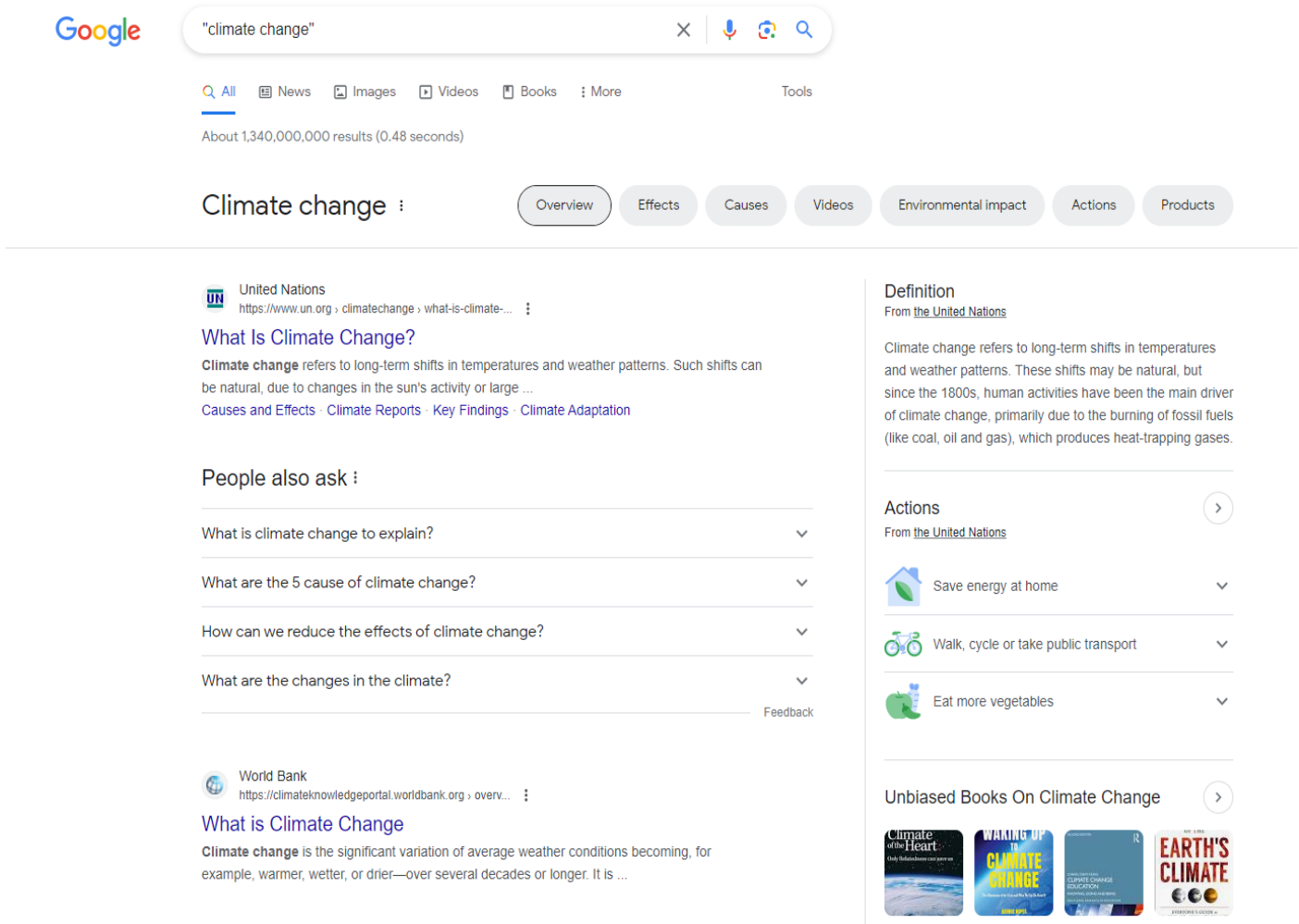


2. Exact Match Search :

- An exact match search is a technique used to find results that contain the exact phrase or terms specified in the search query.
- By using quotation marks around a phrase or set of words, Google will return only those results that contain the precise sequence of words in the same order as typed.
- This method is particularly useful when looking for specific phrases, names, quotes, or any exact string of text. For example, if you are searching for information on "responsive web design," you would type :



Exact Match:

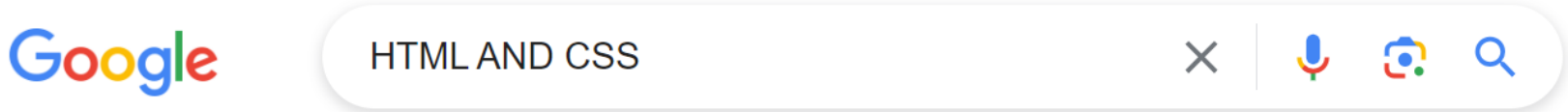

Google
"climate change"
All
News
Images
Videos
Books
More
Tools
About 1,340,000,000 results (0.48 seconds)
Climate change
Overview
Effects
Causes
Videos
Environmental impact
Actions
Products
United Nations
https://www.un.org › climatechange › what-is-climate-...
What Is Climate Change?
Climate change refers to long-term shifts in temperatures and weather patterns. Such shifts can be natural, due to changes in the sun's activity or large ...
Causes and Effects · Climate Reports · Key Findings · Climate Adaptation
People also ask
What is climate change to explain?
What are the 5 cause of climate change?
How can we reduce the effects of climate change?
What are the changes in the climate?
Feedback
World Bank
https://climateknowledgeportal.worldbank.org › overv...
What is Climate Change
Climate change is the significant variation of average weather conditions becoming, for example, warmer, wetter, or drier—over several decades or longer. It is ...
Definition
From the United Nations
Climate change refers to long-term shifts in temperatures and weather patterns. These shifts may be natural, but since the 1800s, human activities have been the main driver of climate change, primarily due to the burning of fossil fuels (like coal, oil and gas), which produces heat-trapping gases.
Actions
From the United Nations
Save energy at home
Walk, cycle or take public transport
Eat more vegetables
Unbiased Books On Climate Change
Climate of the Heart
WAKING UP TO CLIMATE CHANGE
EARTH'S CLIMATE

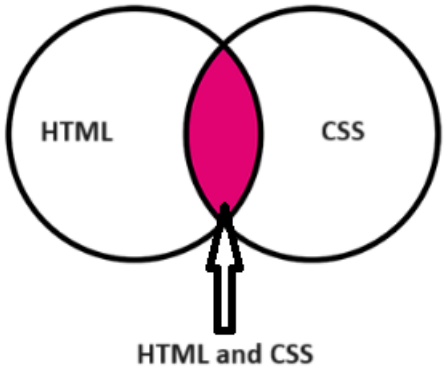
3. Boolean Search: This is a very common search technique that combines search terms according to the Boolean logic. Three types of Boolean search are possible: AND search, OR search and NOT search.

A. Boolean AND search:

- allows users to combine two or more search terms using the Boolean AND operator. A Boolean AND search will retrieve all those items where all the constituent terms occur. For example, the following search expression "Internet and WWW" will retrieve all those records where both the terms occur.

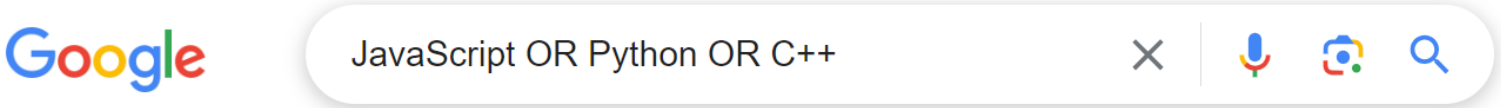
For example, "HTML AND CSS" will show results containing both HTML and CSS.

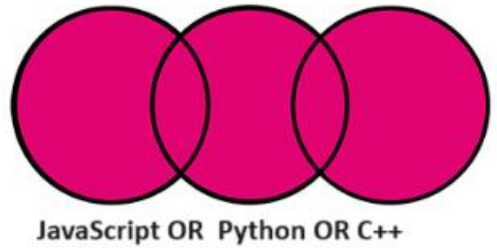




B. Boolean OR search:

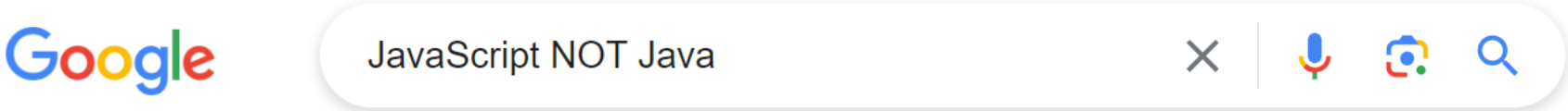
- allows users to combine two or more search terms such that the system retrieves all those items that contain either one or all of the constituent terms.
- Thus, the following search expression "Colleges or Universities" will retrieve all those records (1) where the term Colleges occurs, (2) where the term Universities occurs, and (3) where both the terms occur. Note that this is contrary to the use of the term 'or' in normal English.
- Consequently, the output of OR searches will be more. When too many search terms are ORed, the search output may be too big to handle.
- **For example**, "JavaScript OR Python OR C++" will show results containing either JavaScript or Python or C++.

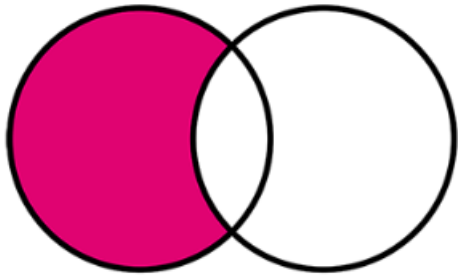




B. Boolean NOT search:

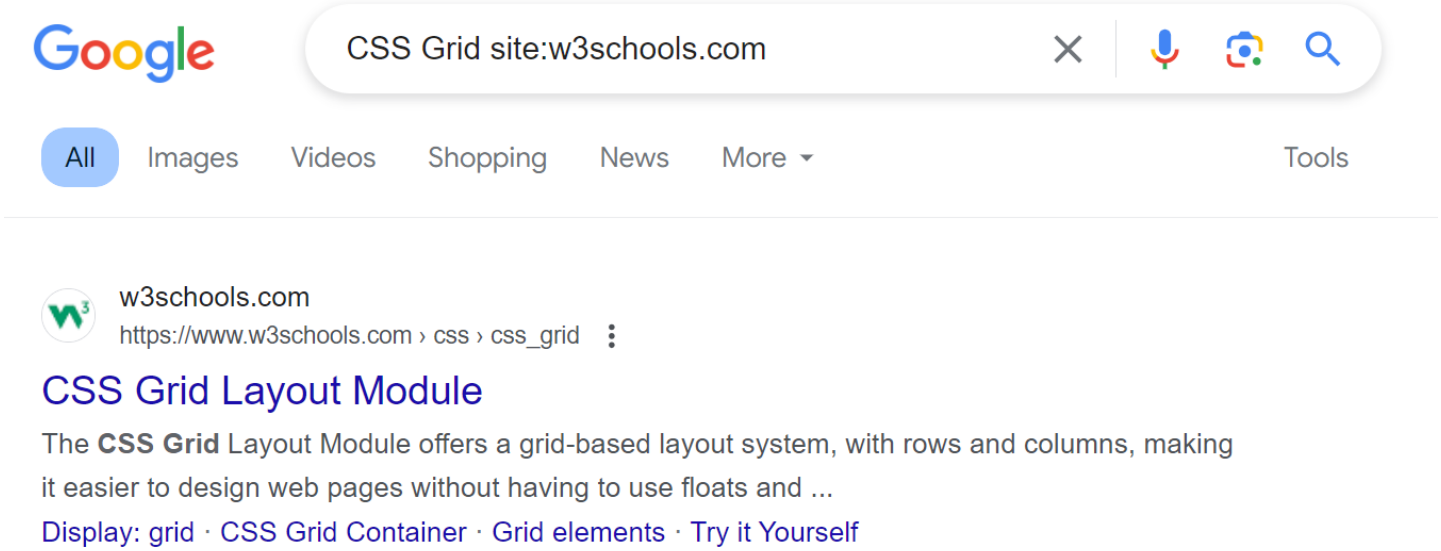
- Excludes results containing the specified term.
- search allows users to specify those terms that they do not want to occur in the retrieved records.
- **For example**, "JavaScript NOT Java" will show results about JavaScript but exclude those about Java.





4. Site Search:

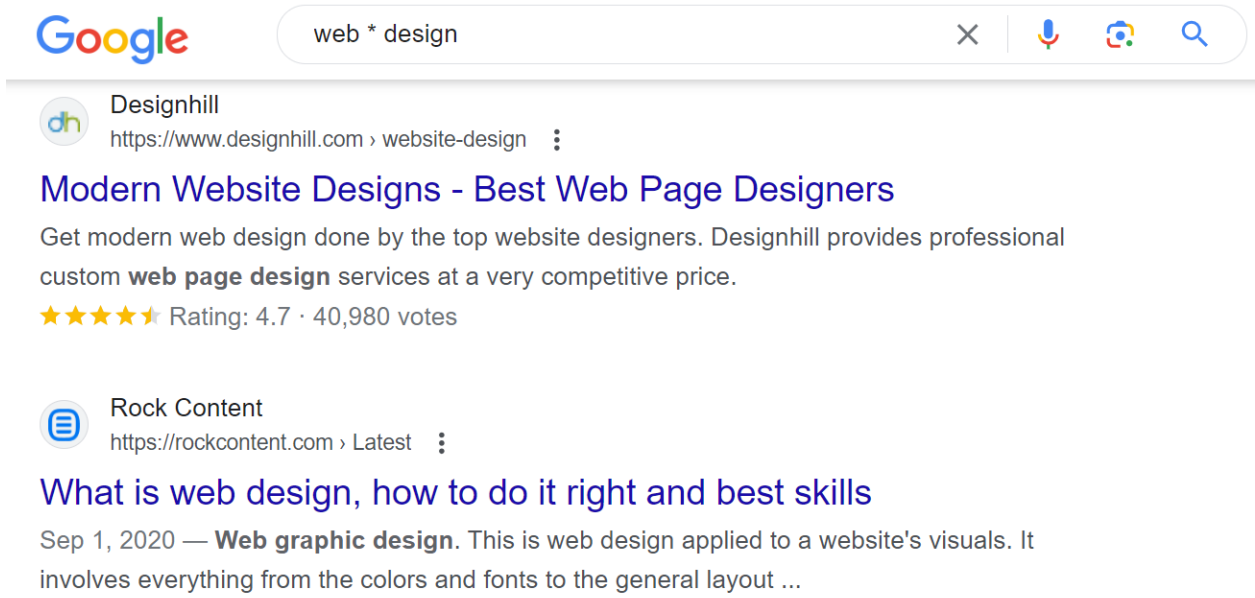
- To search within a specific website, use the "site:" operator.
- **Example:** Searching for "CSS Grid site:w3schools.com" will return results about CSS Grid specifically from w3schools.com



5. Wildcards (*) search:

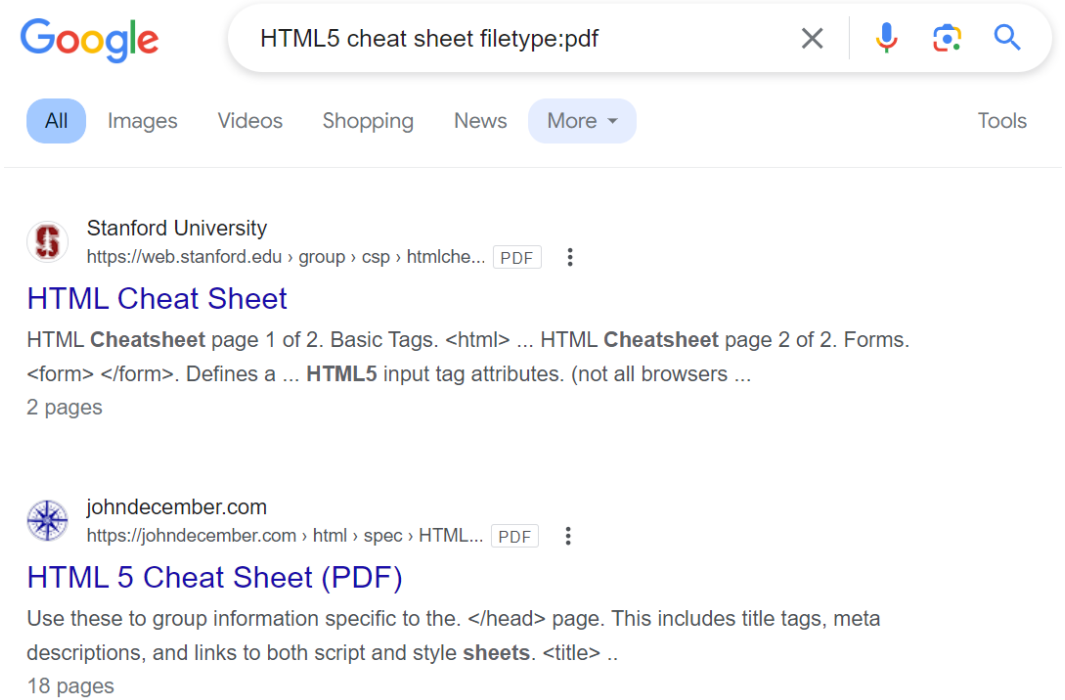
Using an asterisk (*) as a placeholder for any word or part of a word. Google allows the use of asterisks (*) as placeholders for missing words.

- **For example,** Searching for "web * design" will return results for web development design, web graphic design, web responsive design, etc.



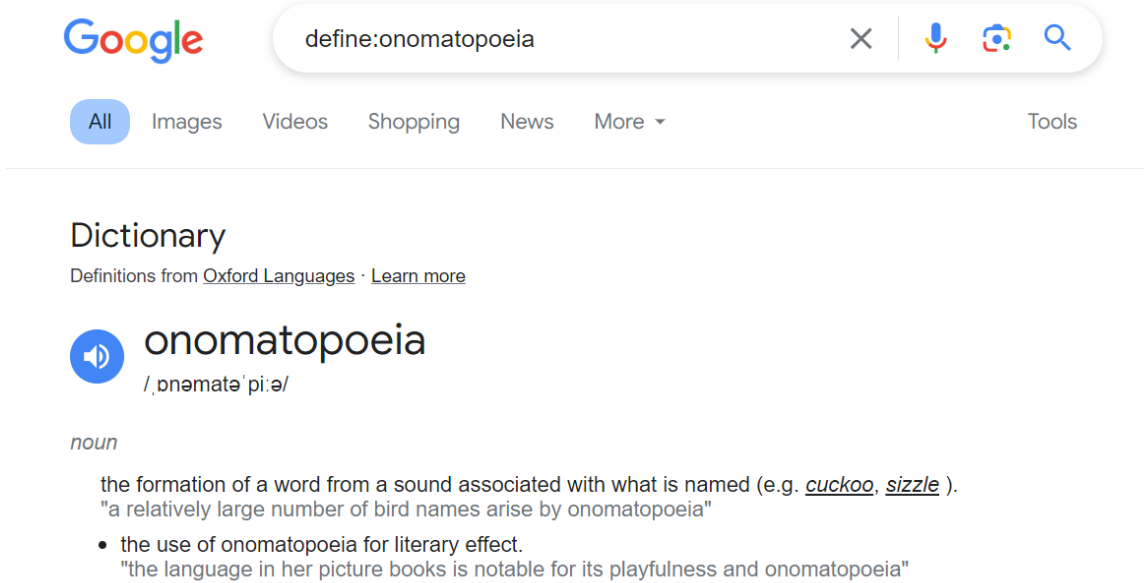
6. File Type Search:

- Using the filetype: operator to search for specific types of files.
- **Example:** Searching for "HTML5 cheat sheet filetype:pdf" will return PDF files related to HTML5 cheat sheets.



7. Definitions: To get a definition of a word or term, simply type "define:" followed by the word. For

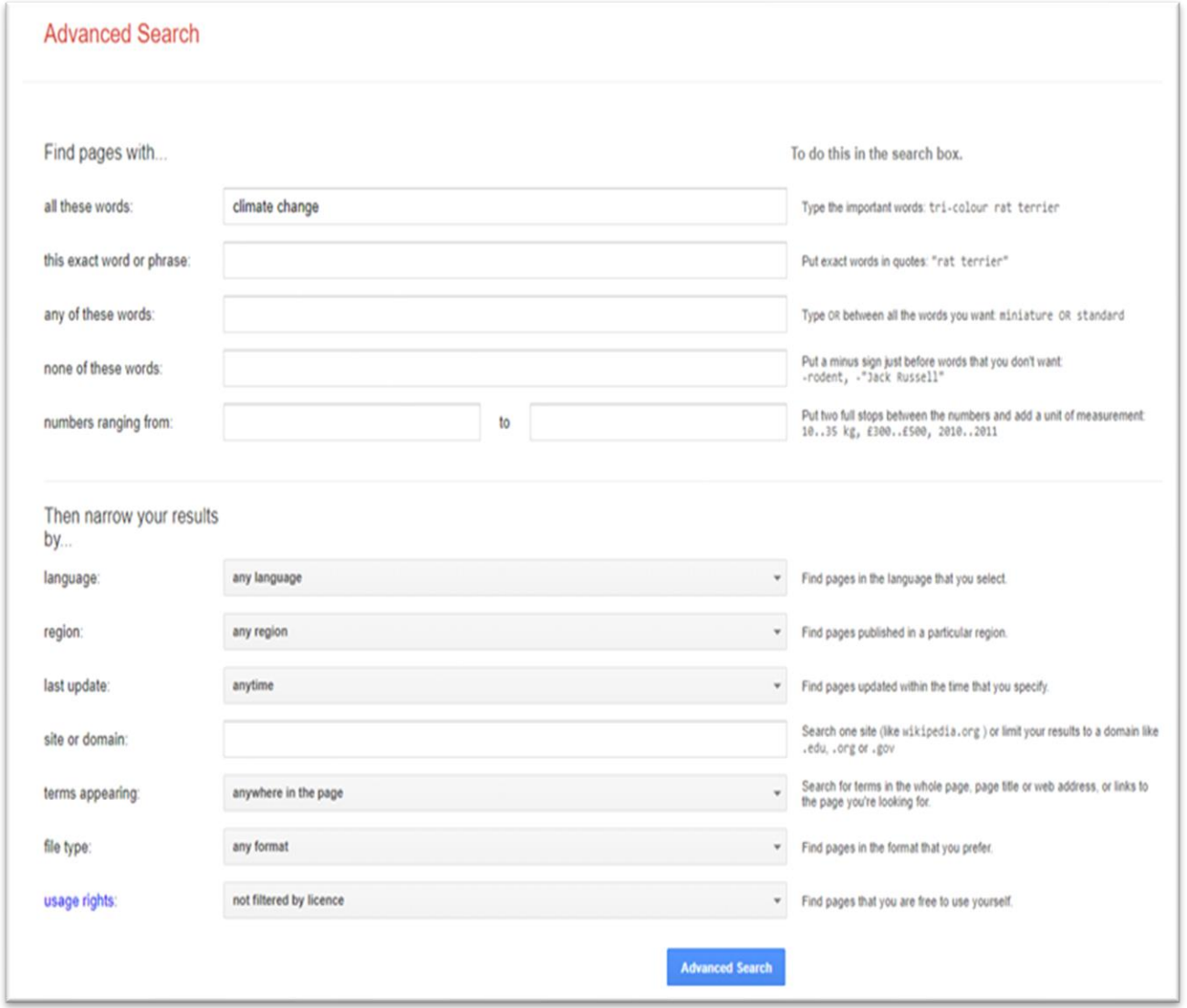
- **Example**, "***define:onomatopoeia***" will provide the definition of that word.



- **Calculator and Unit Converter:**
  - You can use Google for quick calculations and unit conversions.
    - E.g, entering "**5+8**" will give you the result, and
    - "**100 USD to birr**" will convert 100 US dollars to birr.
- **Time-Based Searches:**
  - You can specify a time range for your search results.
  - Use the "Tools" feature under the search bar to select a custom time range, such as "Past year" or "Custom range."
- **Location-Based Searches:**
  - To find local businesses or services, include a location in your search query.
    - E.g, "coffee shops near me" will display coffee shops in your current location.

Using Advanced Search Features

- Advanced Search Options provide a powerful way to refine and customize your searches, enabling you to find more specific and relevant information.
- These options allow you to narrow down your search results based on various criteria. Refine your results using advanced search features
  - Exact Words
  - Exclude Words
  - Site or Domain
  - File Type
  - Usage Rights
  - Region
  - Last Update
  - SafeSearch
  - Language



Reverse Image Search



- **Reverse Image Search** is a feature provided by Search engines that allows users to search for information, related images, and sources using an image as the search query instead of text.

Key Use Cases for Reverse Image Search:

Verifying	**Verifying Image Authenticity:** Check if an image has been edited or manipulated by comparing it with the original or other versions online
Identifying	**Identifying Sources and Attribution:** Find the original source of an image to provide proper attribution or credit, especially for creative works
Researching	**Researching Products or Objects:** Use reverse image search to identify objects, products, landmarks, or artworks within an image
Detecting	**Detecting Fake Profiles or Scams**: Verify the authenticity of profile pictures on social media or dating platforms to identify potential scams or fake accounts
Locating	**Locating Higher-Resolution Versions**: Find higher-resolution versions of images for various purposes, such as printing or design projects



Learning Activities

Instructions:

1.Open web browser and go to Google (www.google.com).

2.Start with a basic keyword search. Choose a topic you're interested in, such as "climate change."

3.Click on "Settings" that is to the right side of the search bar.

4. Click on "Advanced Search." On the popup window. explore and use the following advanced search options: Exact Word,Exclude Words, Site or Domain, File Type, Usage Rights, Region, and Last Update

Learning Activities

Activity 2 — **Carry out a search using an image:**

Instructions:

1. Search an image from the internet and save it in your computer. (Search for pig fish)
2. In the search box in the Google Images search engine, select the camera icon.

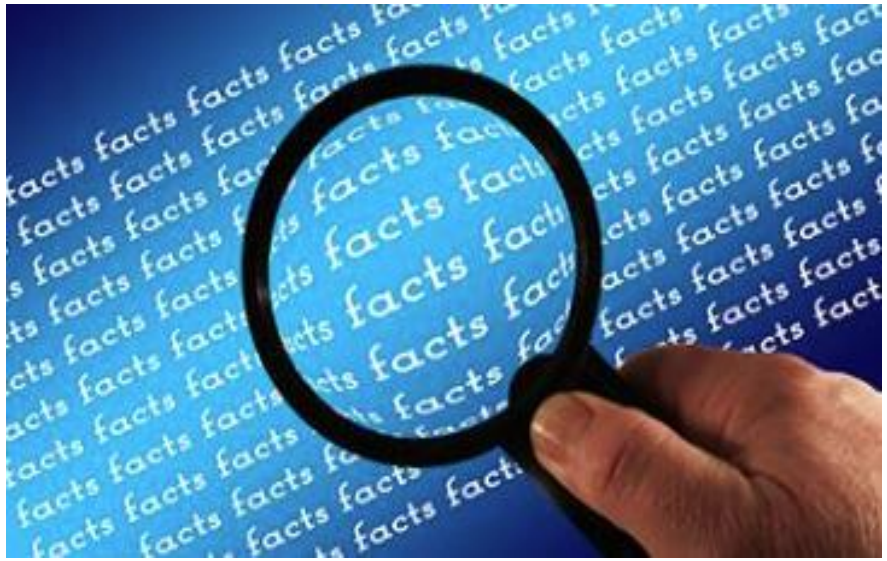


3. click the Upload an image tab, click Choose file browse to an image on your computer or device, select the desired file and click Open.
4. Click the Search button or press Enter and visualize the different results.
5. Using your critical thinking find whether the image is real or fake.



Discussion Questions

- Why should you evaluate online sources?
- How you evaluate online (and offline) sources?
- How do you crosscheck news's?



- In the digital age
  - There are a vast number of ICT resources online that you can use
  - There are also many sites, blogs and social media posts that aim to share inaccurate information to mislead people, either to further a political or religious agenda or for financial gain.
  - **Knowing which content is accurate** and from a reliable sources, especially when searching online, is not always straightforward.
  - It's **essential to critically evaluate online information** to ensure its accuracy, reliability, and credibility.
  - In order to select suitable, effective and trustworthy ICT resources, you should always critically evaluate resources using **a well-defined set of evaluation criteria.**

Steps to Critically Evaluate Online Information



Check the Source's Credibility and Authority:



Assess Accuracy and Reliability:



Evaluate Currency:



Analyze Bias and Objectivity:



Check for References and Citations



Consider Relevance:



Use Fact-Checking Tools:



Consult Multiple Sources:

Using online resources responsibly

- There are a **vast number of ICT resources** online that you can use
- **However,** there are r**ules and responsibilities** when using online resources.
- These rules apply to anyone using online resources including trainers so **ensure that they know their responsibilities as well**





Avoid Plagiarism

Plagiarism is the act of presenting someone else's work as your own

For TVET trainers, it's crucial to understand and avoid plagiarism when developing teaching materials

Most teachers look out for plagiarism in their students work but may not be thinking about it when they are searching for online resources to use in class

How TVET trainers Can Avoid Plagiarism

Proper Citation: Always give credit to the original authors when using their work

Paraphrasing and Quotation: When incorporating external information, paraphrase the content in your own words and use quotations for direct statements, ensuring that both are properly cited

Plagiarism Detection Tools: Utilize plagiarism detection software like Turnitin or Grammarly to check for unintentional plagiarism in your work

Citation Examples

1. **APA (American Psychological Association):** In-Text Citation Examples:

- **Quoting:** "This is a direct quote" (Smith, 2020, p. 45).
- **Paraphrasing:** Smith (2020) stated that paraphrasing is a crucial skill.

Bibliography Example:

- **Book:**
  - Smith, J. A. (2020). *Understanding Citation Styles*. Academic Press.
- **Journal Article:**
  - Brown, L. M. (2019). The importance of paraphrasing in academic writing. *Journal of Writing Research*, 10(2), 123-134.

2. **IEEE (Institute of Electrical and Electronics Engineers): In-Text Citation Examples:**

- **Quoting:** "This is a direct quote" [1].
- **Paraphrasing:** Smith [1] explains that paraphrasing is a crucial skill.

Bibliography Example:

- **Book:**
  - [1] J. A. Smith, *Understanding Citation Styles*. New York: Academic Press, 2020.
- **Journal Article:**
  - [2] L. M. Brown, "The importance of paraphrasing in academic writing," *Journal of Writing Research*, vol. 10, no. 2, pp. 123-134, 2019.

1.3.5. Using online resources responsibly



Copyright

Copyright can be described as a **set of rights granted to the creator of an original work, which allows them to copy, distribute and adapt their work and prevents anyone else from doing so**

In most cases copyright is effective from the creation of the work for a set period of time, after which the work is said to enter the public domain

TVET teachers must respect copyright laws when using materials in their teaching

How TVET Trainers Can Respect Copyright

Use	**Use Licensed Materials:** Ensure that any materials used in teaching are properly licensed or fall under fair use or public domain
Utilize	**Creative Commons:** Utilize resources that are licensed under Creative Commons, which allows for legal sharing and adaptation with proper attribution
Seek	**Seek Permission**: When in doubt, seek permission from the copyright holder before using their work

Intellectual Property Rights



Another concept to be aware of when sourcing online resources is intellectual property rights , which are the rights someone has over something they have created for a period of time.

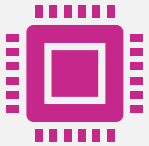


TVET trainers should be aware of intellectual property rights to avoid infringement and to educate students about the importance of protecting original ideas and creations.



Understanding intellectual property rights can help trainers create a learning environment that fosters innovation and creativity.

Software Licenses



You should also be familiar with different types of software licenses and how you can use a resource depending on the type of license



Software products are usually licensed and it is important to use them in accordance with their license terms and conditions



Depending on the license and relevant laws, using software products without permission may result in civil and criminal penalties

Types of Software Licenses

Proprietary Licenses:

Software that requires purchasing a license for use, with restrictions on modification and redistribution

Open Source Licenses:

Software that is freely available to use, modify, and distribute, often with conditions to maintain the same freedoms in derivative works

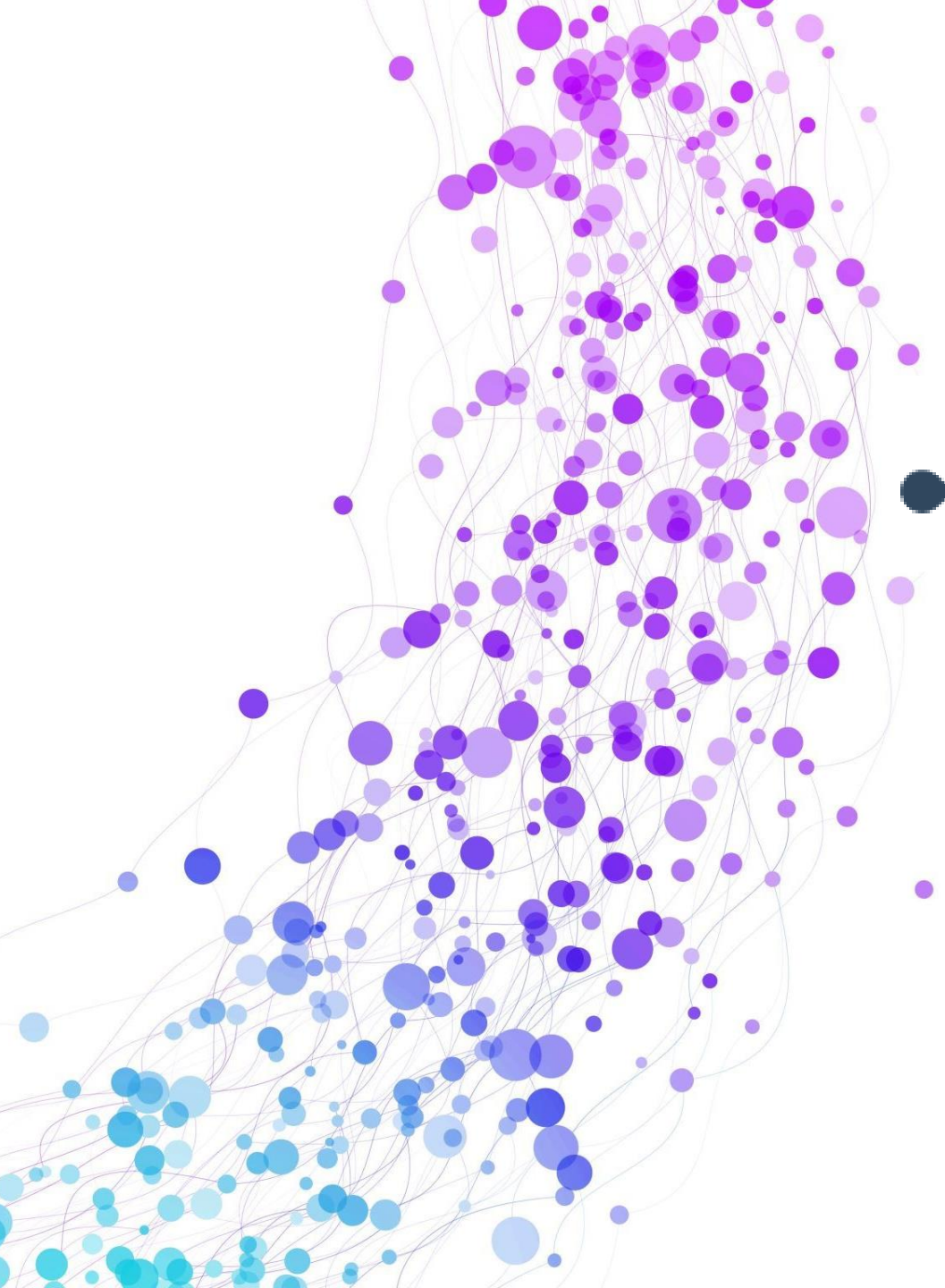
How TVET Trainers Can Respect Software Licenses



Adhere to License Terms: Ensure that all software used in teaching is properly licensed and used in accordance with the terms of the license



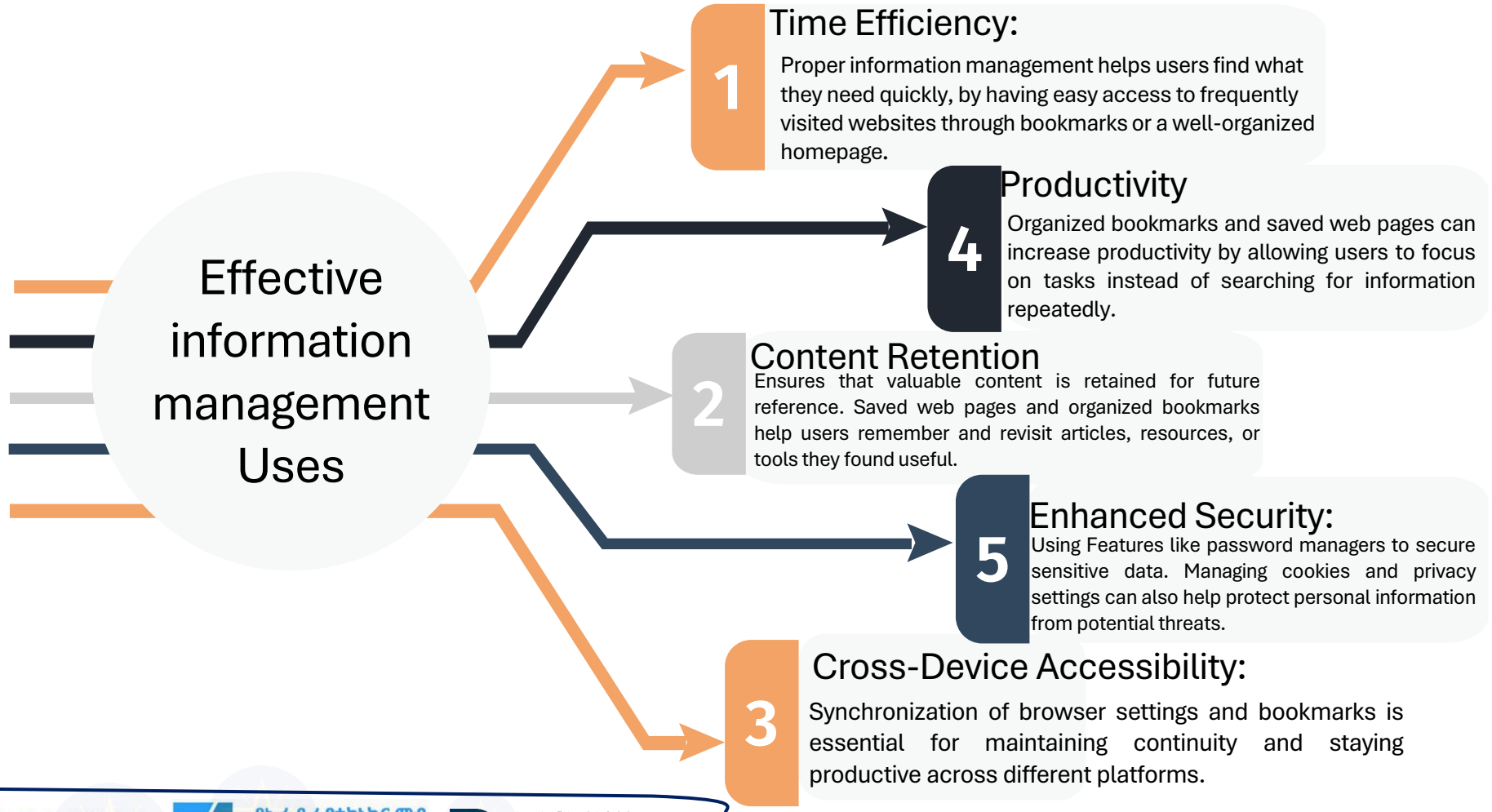
Use Open Source Software: Where possible, use open-source software to avoid licensing issues and promote learning about software development

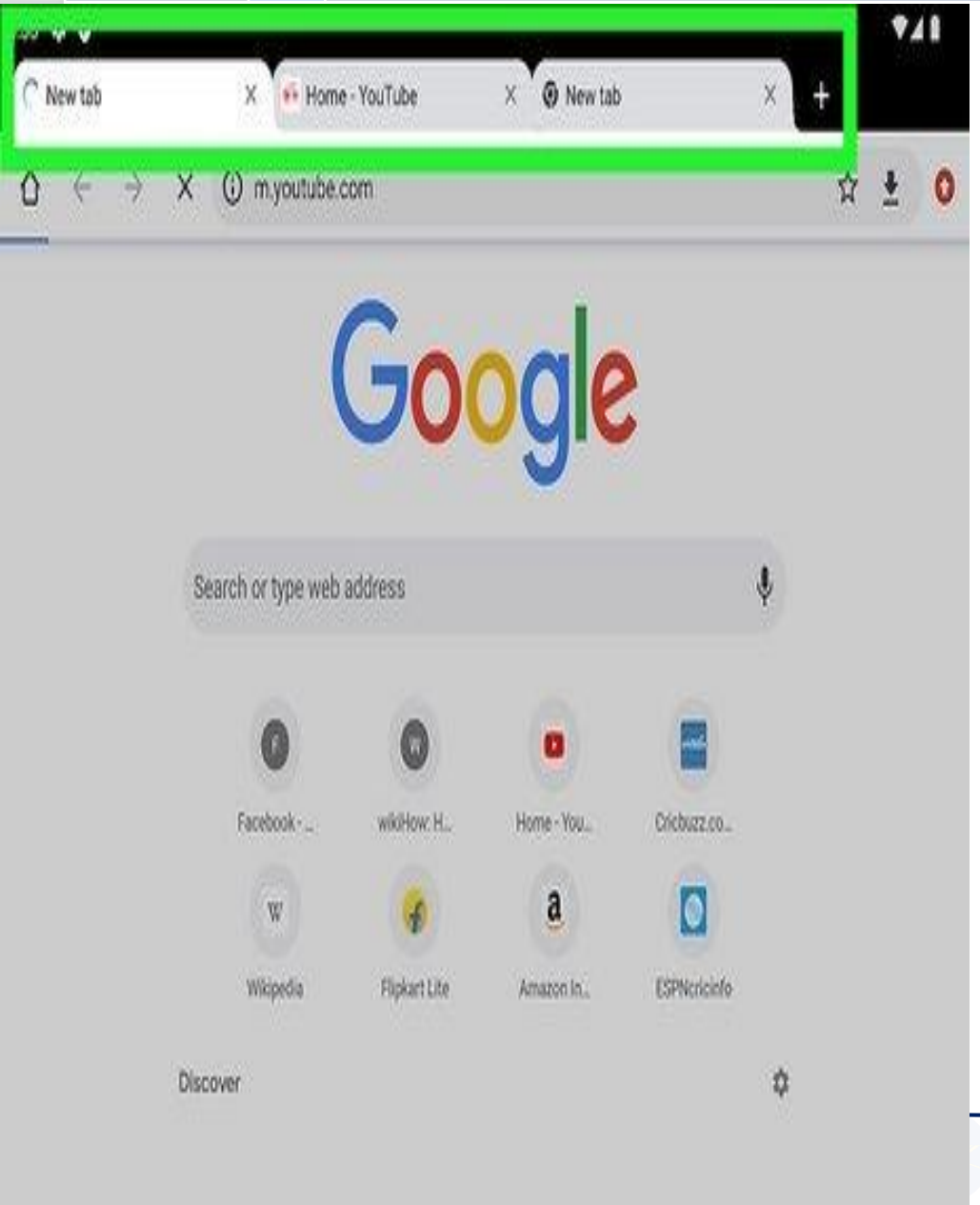


3 Managing Online Resources using Web Browsers

- Effective information management when using web browsers is crucial nowadays.
- It is also crucial for TVET trainers to optimize their research, planning, and content creation processes.
- It can significantly enhance productivity, save time, and help users stay organized.
- It includes Managing bookmarks, Setting homepages, synchronizing browsers, saving webpages, and configuring privacy settings.
- Here's how educators can leverage web browsers for online information management:

- Next are some key areas of importance of effective information management:





Tabs and Windows Management

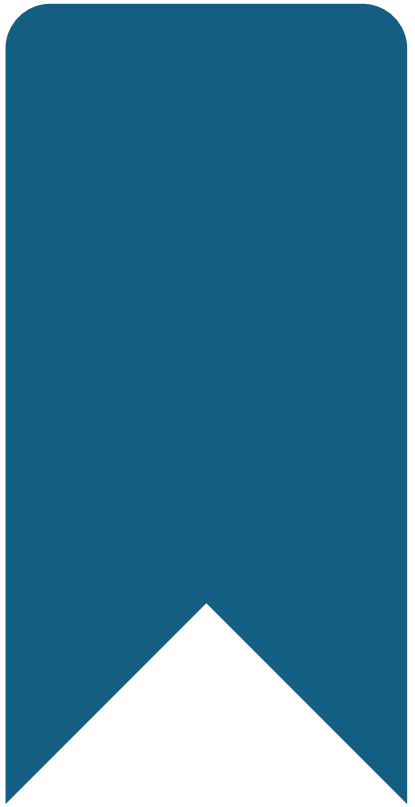
- Tabs and windows are fundamental components of web browsing
- This refers to the ability to open multiple tabs and manage them within a browser window, allowing users to navigate between different web pages efficiently without cluttering their screen with multiple windows
- different browsers support these futures.

How to do the following in Google Chrome?

- **Opening a New Tab:**
- **Opening a Link in a New Tab or in new window**
- **Closing a Tab:**
- **Reopening a Closed Tab**
- **Moving a Tab:**
- **Pinning a Tab:**
- **Unpinning a Tab:**
- **Grouping Tabs**
- **Ungrouping Tabs:**
- **Using the Tab Search Feature:**

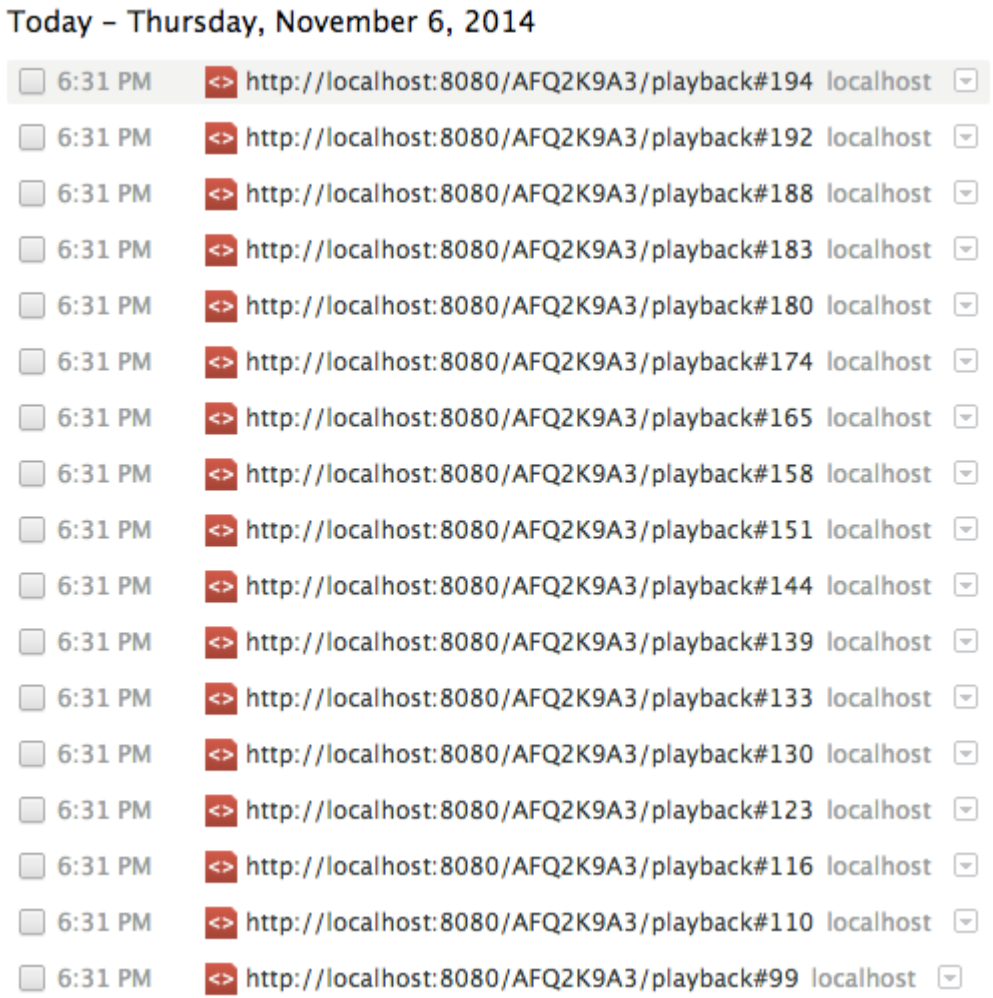
Managing Bookmarks

- Bookmarks and favorites are tools for saving and organizing frequently visited websites
- Learning to create, edit, and organize bookmarks enables users to quickly access their preferred online destinations, enhancing overall productivity
- These skills will help you efficiently manage your bookmarks enhancing your browsing experience and organization



How to Managing bookmarks in Google Chrome?

- Add a bookmark:
- Accessing Bookmarks:
- Organizing Bookmarks into Folders
- Edit a bookmark
- Delete a bookmark
- Importing Bookmarks:
- Exporting Bookmarks:



Managing Browser History

- Browser history is a record of all the web pages a user has visited over a certain period of time, maintained by the web browser.
- When you use any web browser, various types of data can be stored in your browsing history.
- This stored data helps improve your browsing experience by making it easier to revisit previously visited sites, autocomplete forms, and resume activities where you left off.

1.4. Managing Online Resources using Web Browsers

Here's a detailed list of the different types of data that can be stored in your browser history:

- **Browsing History:**
  - **URLs of Visited Pages**: The web addresses (URLs) of the pages you have visited.
  - **Page Titles:** The titles of the web pages you have visited.
  - **Visit Timestamps:** The dates and times when you visited each page.
- **Download History:** A record of files you have downloaded, including filenames and download dates
  - Cookies: Small files stored by websites to remember your login status, preferences, and other information
  - Session Data: Information about your current browsing session, such as items in a shopping cart
- **Cookies and Site Data:**
  - **Cookies:** Small files stored by websites to remember your login status, preferences, and other information.
  - **Session Data:** Information about your current browsing session, such as items in a shopping cart.

- **Cached Images and Files**: Copies of web pages, images, and other media content saved to speed up loading times on future visits
- **Passwords:** Usernames and passwords for websites you choose to save for easy access
- **Autofill Form Data:** Information you have entered into forms, such as names, addresses, phone numbers, and email addresses
- **Search History**: Records of the search terms you have entered into search engines
- **Bookmarks:** URLs of pages you have bookmarked for quick access
- **Site Settings** : Settings you have configured for specific websites, such as whether a site can use your camera, microphone, or location
- **Hosted App Data:** Data from Chrome apps and extensions, including settings and stored information

How to perform the following tasks in Google Chrome to Manage Stored Data ?

- Access Browser History:
- Find a Page from Your History
- Manage Saved Passwords:
- Managing Autofill Form Data in Google Chrome
- Delete Your History:
- Delete Your Activity



Discussion

Discuss the drawbacks and good experiences in synchronizing settings across devices.



Syncing Browsing Data across Devices

- Synchronization, often referred to as "sync" in web browsers, is a feature that allows you to link your web browser settings, bookmarks, history, saved passwords, and other data across multiple devices, such as your computer, smartphone, or tablet
- Synchronization is particularly useful for those who use multiple devices to access the internet and want to have the same browsing experience everywhere
- Managing sync settings allows you to control what data is synced and ensure your information is secure and up-to-date

Advantages of Syncing Across Devices



Consistent Experience: Access the same bookmarks, history, passwords, and settings on all your devices



Convenience: Automatically fill in passwords, payment methods, and addresses stored in your Google account

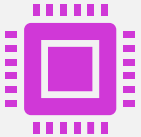


Backup and Recovery: Easily recover your data if you lose or replace a device

Disadvantages of Sync



Security Risks: If your Google account is compromised, all synced data, including passwords and browsing history, can be accessed by unauthorized individuals



Data Usage: Syncing can consume data, which might be a concern for users with limited data plans or slow internet connections



Device Dependency: If sync settings are not managed properly, changes made on one device can affect your experience on all synced devices, which may not always be desirable

How to activate Sync in google chrome?



Learning Activities

Instructions:

1. **Scenario**: Imagine you're a professional who frequently uses a web-based project management tool like “https://trello.com”. You want to set it as your browser's homepage for quick access. **How will you do it?**
2. **Scenario:** Imagine you're You are a student who wants to organize your research materials for different subjects. Like programming, analysis, and Methodology. **How will you do it?**
3. **Scenario:** You want to bookmark a page with useful programming resources within your "Programming" bookmark folder. **How will you do it?**
4. **Scenario:** Assume you are preparing a module about making different recipes in finding the information You come across a webpage with a recipe you'd like to try out later when you go home and offline. **How will you do it?**
5. **Scenario:** assume you are a remote worker who switch between multiple devices (e.g., computer, tablet, smartphone) and want your browser settings to be consistent. **How will you do it?**



Day 1 Discussion Points

- What are the key concepts and skills you have learned in the units discussed?
- How can the knowledge you gained help you improve your teaching Practice in your work environment?
- How can the lessons learned in this unit contribute to fostering a culture of digital literacy and responsible internet use among your students? What role do you see yourself playing in this cultural shift?
- Considering the rapid pace of technological change, how do you plan to keep your skills in accessing and managing online information up to date? What resources or strategies will you use to continue learning in this area?


thank you