



open SPatial data Infrastructure eDucation nEtwoRk: Active teaching on SDI: key concepts and methods

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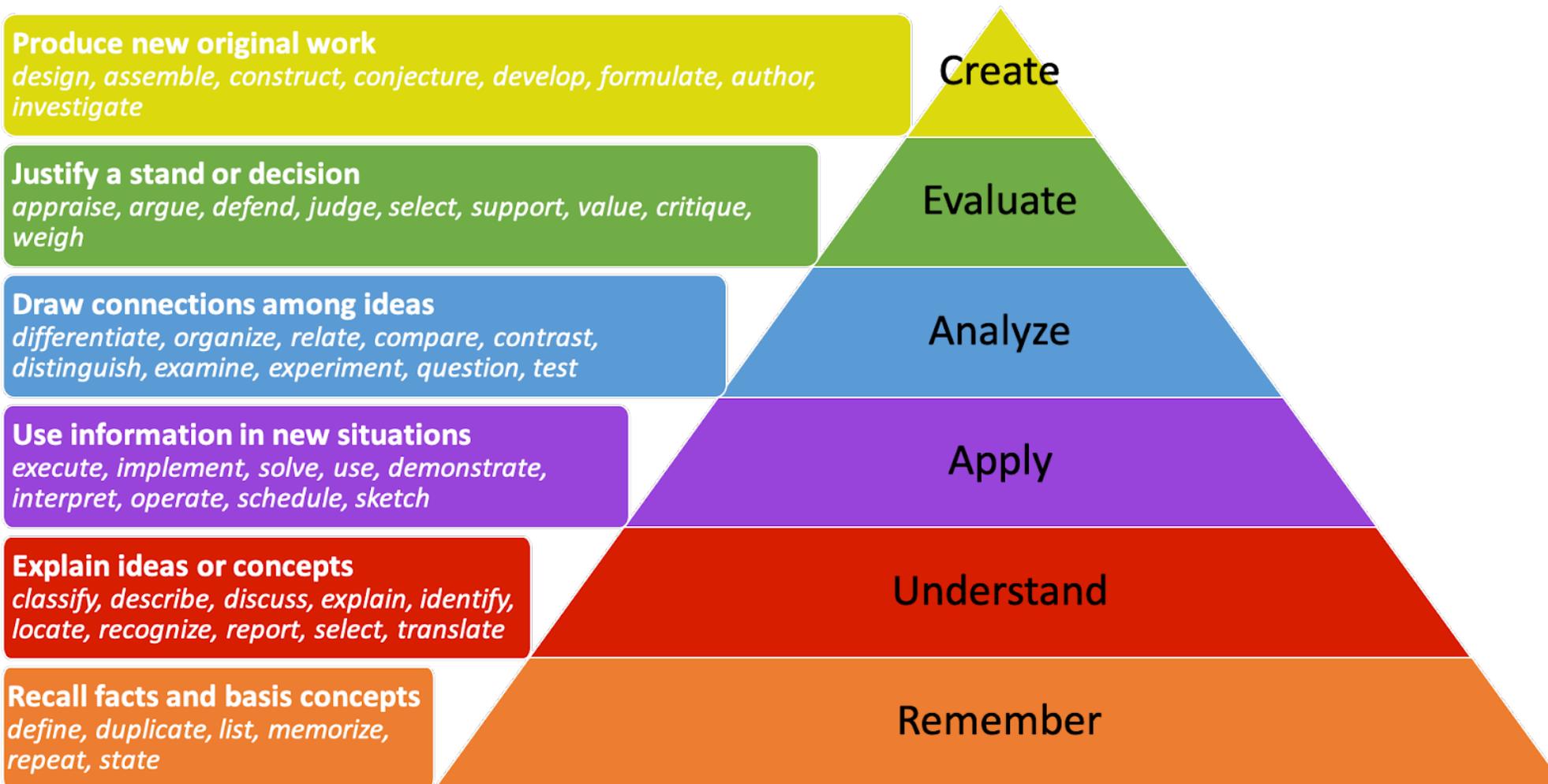


Active teaching: what and why

- Refers to methods that dynamically involve students in the learning process (Meneske *et al.* 2013)
 - Students guide the lessons and teachers become coaches
 - More effective than traditional lecturing
 - More fun for students and for teachers!

What do we want to achieve in teaching?

Bloom's Taxonomy



Active Learning Process stages

1. Orientation

- Motivation to actively participate
 - Experience, how will the new learning build on existing skills / knowledge
 - Present worth, what will be the value of what will be taught
 - Future usefulness

2. Active processing

- Actively engage students with the content

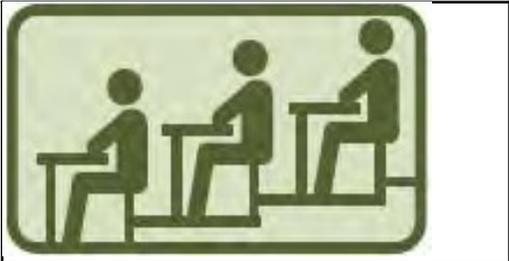
3. Evaluation and feedback

- During and after the course
 - Formative, to support learning process
 - Summative, to support assessment

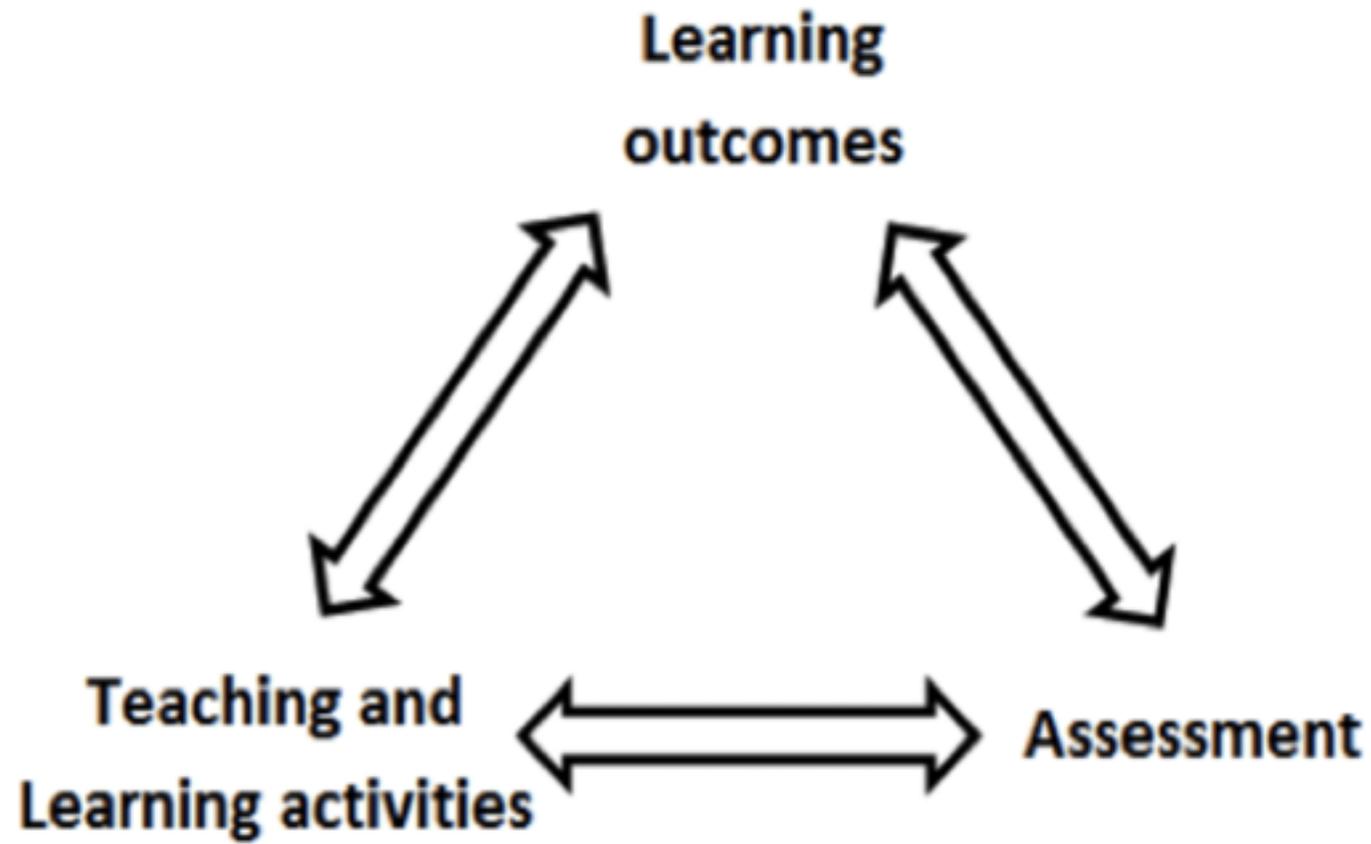
Active learning categories and activities

Students think along	Students participate		
	Individually	In pairs / groups	Outside the classroom
Concept map by teacher	Concept map by students		
Demonstration by teacher	Active listening	Brainstorm	Site visits / excursions
Teacher shows examples	Active writing for reflection during class	Class discussion	Group work
Guest speakers	Students assemble portfolio	Cases / role play / simulations	Peer Assisted Learning / peer review
Rhetorical questions	Teacher asks question to student(s)	Think-pair-share / snowballing	Active writing to e.g. summarise textbook chapter / article

Teaching environments

	<p>Frontal Teaching is teacher-centred. The teacher, situated at the front of a teaching room, elaborates on a subject, shows presentations and/or uses the board, and explains topics. Students take home individual work or group assignments.</p>
	<p>Mixed practice is student-centred. Students follow classes with alternating practices, such as a frontal introduction and subsequently working in student groups on assignments. The teacher and assistants walk around to help where needed.</p>
	<p>Collaborating focuses on team work and group assignments. Students have to apply their knowledge in projects and learn to communicate, collaborate and cooperate in teams while they are coached by the instructor.</p>
	<p>Testing is for students to demonstrate what they have learned, either as paper-based or digital testing. Digital testing has the advantage to support both campus exams and tests for online classes and MOOCs. Digital exam halls can also be used for computer practicals.</p>

Constructive alignment



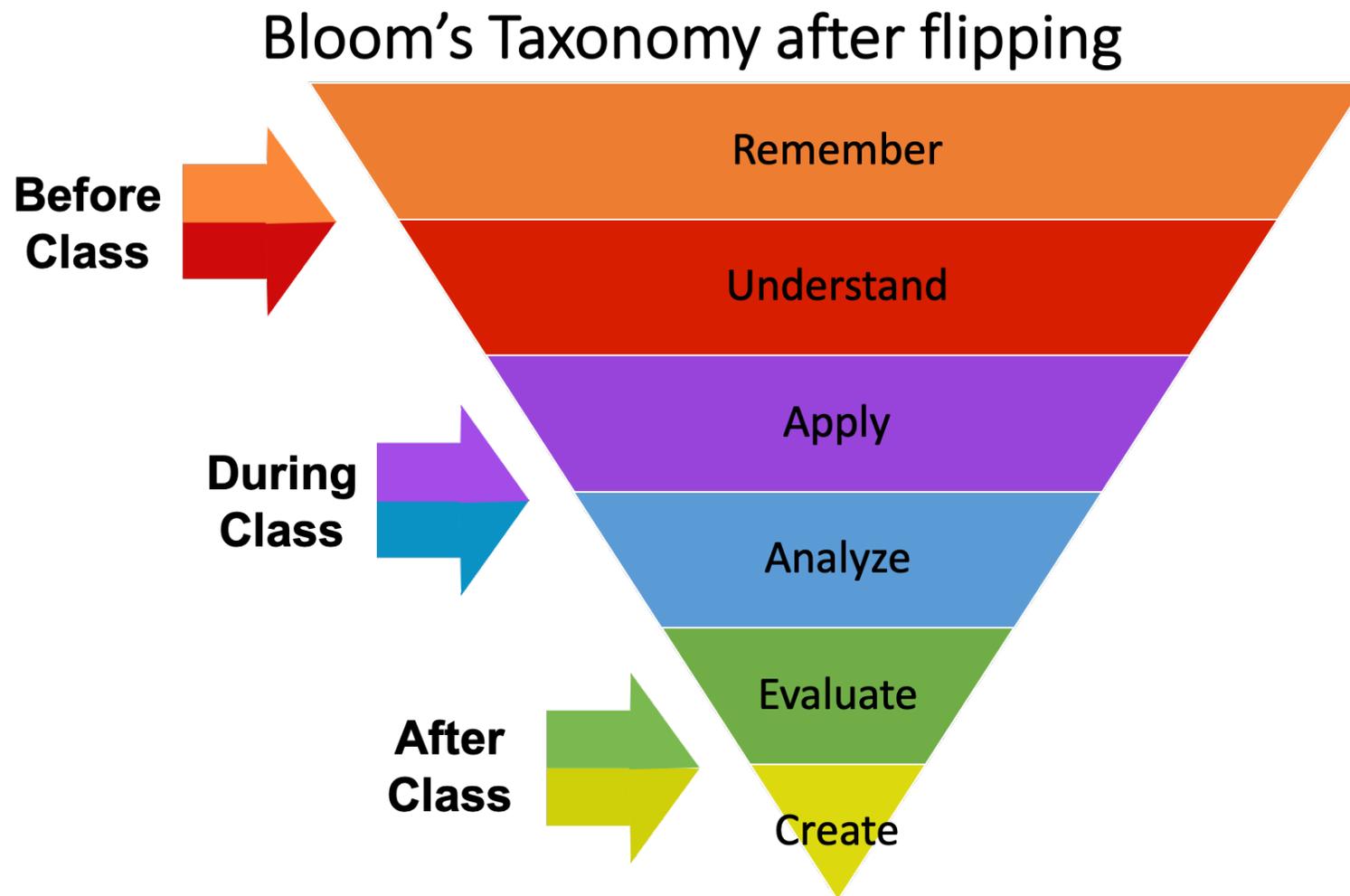
Examples of individual active learning in class

- Let student draw concept maps / mini maps
- Let student come up with examples of content that was just explained
- Ask (rhetorical) questions
- Active writing for reflection
 - One-minute papers / summaries
 - Muddiest point
 - Formulate an exam question
- Portfolio, to integrate theory, action, self-reflection and assessment

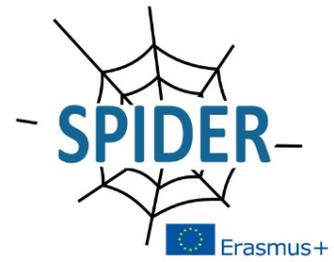
Examples of group active learning in class

- Group work
 - Cooperative learning, students work in small groups on an assignment
 - Think-Pair-Share / Snowball
 - Class discussion
 - Collaborative learning, students and teachers work together
 - Jigsaw
 - Brainstorm / group concept maps
 - Peer-assisted learning
 - Problem-based learning, in which an authentic case forms the starting point
 - Cases / role playing / simulations / games
 - Exercises

Student activities outside the classroom



Virtual classroom

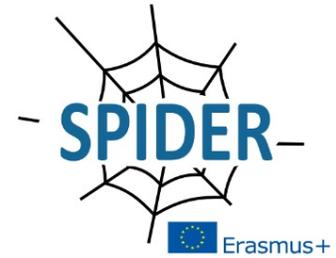


bongo™



twitch

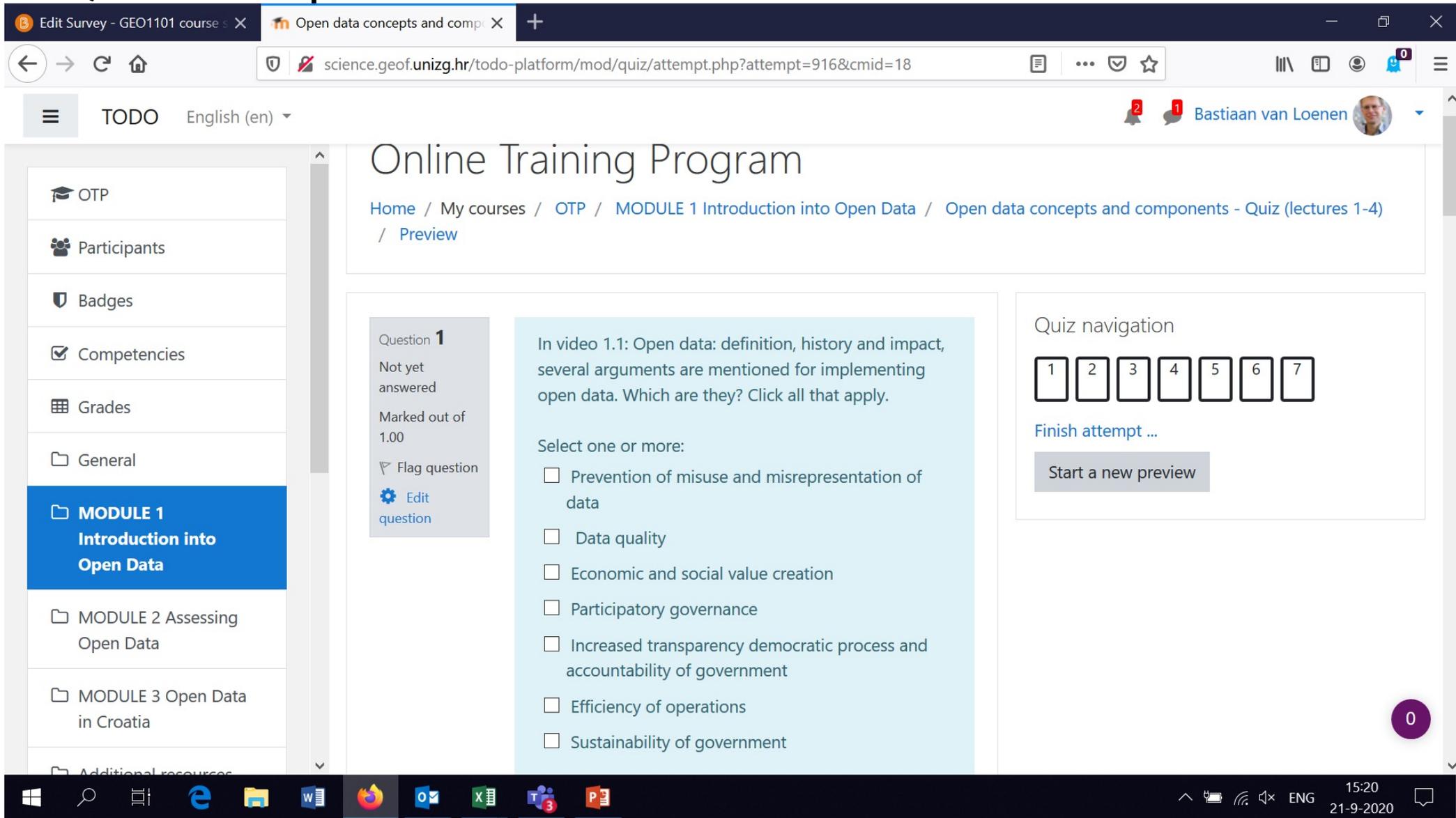
Clips and recorded lectures



A screenshot of a Twitch browser window showing a clip of a streamer named hgl dx. The clip is titled "testing...1..2..testing" and was clipped by MDJong. The streamer is a man with a beard and dark hair, wearing a black shirt and white earbuds. The background shows a room with a white door and a wall with some decorations. The Twitch interface includes a search bar, navigation tabs for Browse, Esports, and Music, and a list of recommended channels on the left. The Windows taskbar is visible at the bottom.

A screenshot of a YouTube browser window showing a video titled "OD01xP_2016_4.3_Implementing Open Government Data Best Practice". The video is unlisted and has 35 views. The main content is a lecture slide titled "Window 1: the problem" from TU Delft. The slide text reads: "Since 1990s the ministry has been responsible for establishing an effective and efficient information infrastructure for its information domain (geo-information)" and "Development of information infrastructure hampered by lack of interoperability at many levels: technical, organisational, legal and lack of consistent access policies". The lecturer is a man in a colorful patterned shirt. The YouTube interface includes a search bar, a sign-in button, and a list of recommended videos on the right. The Windows taskbar is visible at the bottom.

Quizzes per lecture serie



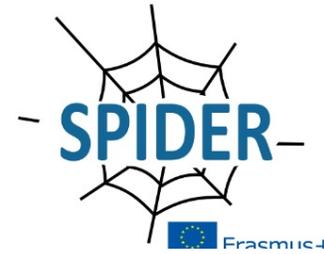
The screenshot shows a web browser window displaying a Moodle quiz page. The browser tabs include 'Edit Survey - GEO1101 course' and 'Open data concepts and comp'. The address bar shows the URL: `science.geof.unizg.hr/todo-platform/mod/quiz/attempt.php?attempt=916&cmid=18`. The page title is 'Online Training Program'. The breadcrumb trail is: Home / My courses / OTP / MODULE 1 Introduction into Open Data / Open data concepts and components - Quiz (lectures 1-4) / Preview. The user is identified as Bastiaan van Loenen. The left sidebar contains a navigation menu with items: OTP, Participants, Badges, Competencies, Grades, General, **MODULE 1 Introduction into Open Data**, MODULE 2 Assessing Open Data, MODULE 3 Open Data in Croatia, and Additional resources. The main content area displays 'Question 1' which is 'Not yet answered' and 'Marked out of 1.00'. The question text is: 'In video 1.1: Open data: definition, history and impact, several arguments are mentioned for implementing open data. Which are they? Click all that apply.' Below the question, it says 'Select one or more:' followed by a list of seven options, each with an unchecked checkbox: 'Prevention of misuse and misrepresentation of data', 'Data quality', 'Economic and social value creation', 'Participatory governance', 'Increased transparency democratic process and accountability of government', 'Efficiency of operations', and 'Sustainability of government'. To the right of the question is a 'Quiz navigation' section with seven numbered boxes (1-7) and a 'Finish attempt ...' button with a sub-button 'Start a new preview'. A purple circular badge with the number '0' is visible in the bottom right corner of the page content.

Discord for the chats



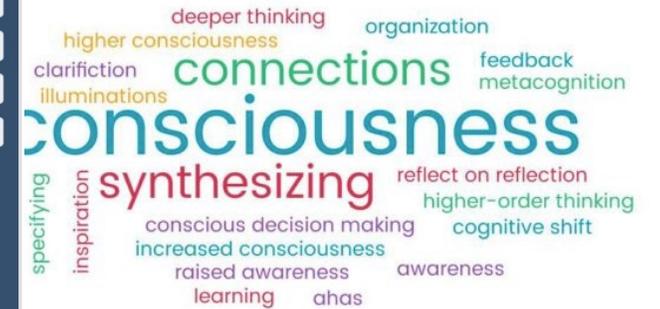
A screenshot of a Discord web browser interface. The browser tabs show "Edit Survey - GEO1101 course" and "#general". The address bar contains the URL "https://discord.com/channels/689753956972363803/689753957572280325". A banner at the top of the chat area says "Want to take full advantage of Discord with better performance, in-game overlay, and more? Get the desktop app!". The server name is "Geomatics server" and the channel is "# general". A blue notification bar indicates "38 New Messages Since 11:20 AM On September 2, 2020". The chat history shows several messages, including a welcome message from "oldest_student_28" and a message from "Laurens van Rijssel" about a "GEOS Workshop September 10th 4:00 - 5:30 pm". A link is provided: "https://enginear.nl/evenementen/workshop-the-foundation-of-your-career-geos-september-2020/". Below the link is an advertisement for "Enginear" with the tagline "create your career" and the text "Workshop 'The Foundation of your career' - GEOS,". The right sidebar shows a list of online users, including "archicoder", "bloenen", "Camilo Caceres", "Carolin", "Chris", "Denis Giannelli", "ellieroy", "everbree", "Gallon", "giorgos_triantafyllou", and "gsclara". The bottom of the screen shows the Windows taskbar with various application icons and the system tray displaying the time "15:02" and date "21-9-2020".

Online polling tools



Mentimeter

actions might occur when you reflect on the is?



5



Which superpower do you wish you had?

When poll is active, respond at PollEv.com/pollster
Text **POLLSTER** to **22333** once to join

- "X-ray vision" over 1 year ago
- "Immortality" over 1 year ago
- "Super Strength" over 1 year ago
- "Superhuman reflexes" over 1 year ago
- "Precognition" over 1 year ago
- "Claws like Wolverine" over 1 year ago
- "Time Travel" over 1 year ago
- "I want to fly!" over 1 year ago
- "breathe underwater" over 1 year ago
- "Invisibility" over 1 year ago
- "Invulnerability" over 1 year ago
- "Superhuman Endurance" over 1 year ago
- "freeze time" over 1 year ago
- "Precognition" over 1 year ago
- "the force!" over 1 year ago
- "Ability to burn objects with my eyes!" over 1 year ago
- "Invisibility" over 1 year ago
- "Teleportation" over 1 year ago
- "super speed" over 1 year ago
- "super strength" over 1 year ago
- "talk to Animals" over 1 year ago
- "Telepathy" over 1 year ago
- "Mind control" over 1 year ago

slido

Top questions (10)

Lucy: Where should we be focusing our business development efforts?

Rachel: What is the status on the new organizational structure?

Peter: Does the company support and cover the costs of external courses?

Anonymous: Why do we invest so many resources in developing our own CRM?

Join at [slido.com](https://slido.com/#eventcode) #eventcode

Poll Everywhere

Orlando Tour Plan (Planning Team) | Microsoft Teams

Survey: Feedback on the New Tour

46 Responses 00:07 Average time to complete Active Status

1. What is your overall impression of the new tour?

46 Responses 3.85 Average Rating

2. Would you recommend this tour to others?

Yes	37
No	9
Maybe	0

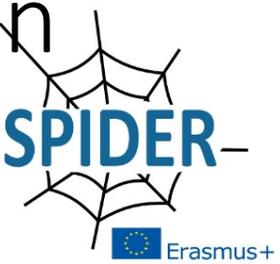
3. Arrange the order of these tour items based on your satisfaction.

Rank	Options	First choice	Last choice
1	Hotel	10	10
2	Cat	10	10
3	Activities	10	10
4	Food	10	10

Chat messages:

- Kat: 9:10 AM Tab conversation has begun.
- Miguel Silva: 9:12 AM Overall rating is OK, but roughly 20% of people would not recommend this tour, this is lower than expected.
- Jarvin Bremner: 9:13 AM Yes, and seems "Food" get a very low ranking in all aspects, which we should pay more attention.
- Angela Nelson: 9:15 AM I will talk to the restaurants to see how we can improve.

Are we able to develop a full – online – course on (open) SDI? introductory, technological aspects and organizational aspects Modules



- Yes we are

A screenshot of a web browser displaying the "Online Training Program" (OTP) interface. The browser's address bar shows the URL "science.geof.unizg.hr/todo-platform/course/view.php?id=2". The page has a dark blue header with "TODO" and "English (en)" on the left, and a user profile for "Bastiaan van Loenen" on the right. A left-hand navigation menu lists various sections: "OTP", "Participants", "Badges", "Competencies", "Grades", "General", "MODULE 1 Introduction into Open Data", "MODULE 2 Assessing Open Data", "MODULE 3 Open Data in Croatia", and "Additional resources". The main content area is titled "Online Training Program" and includes a "General" section with a welcome message: "Welcome to **Twinning Open Data Operational** Online Training Program!". Below this, it states "In this video the set up and goals of the Online Training Program is explained:" and features a video player for "Module 2". The video player shows a play button and a progress bar at 00:03:41. To the right of the video player, there is a list of bullet points for Module 2:

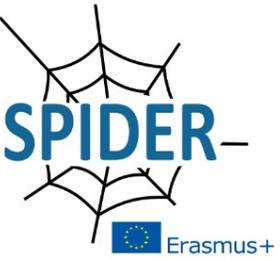
- Online lectures on open data assessment methodologies
- Creation of a TODO interdisciplinary assessment framework:
 - Interdisciplinary teams of UNIZG staff
- Presentation of the created frameworks to the TODO consortium
- Decision on the framework (e.g., its KPIs) to be applied in Module 3

The right-hand side of the page displays the "Course completion status" section. It shows the status as "In progress" and lists required criteria:

Required criteria	Status
Course grade	No grade (70.00 required)
Activity completion	4 of 16

Below the table, there are links for "More details" and "View course report". A purple notification bubble with the number "1" is visible in the bottom right corner of the page. The Windows taskbar at the bottom shows the time as 15:14 on 21-9-2020.

Can we develop an online course in such a way that it is also useful for traditional (offline) teaching and/or blended education by ourselves and by other stakeholders?



- Yes, we already implemented blended learning since 2005 from on campus lectures and online discussion and presentation to all education online
- Online quizzes, material, chats, Q&A can be very supportive to on campus education

Can we develop our online resources (showcase) in such a way that it will inspire/enable other SDI teachers to add their material to it?



What are the challenges we (still) face?

- Problems with connectivity
- Unfamiliarity with platforms
- Students do not always do the preparational work
- Students do not always participate