iLikeIT2

Learning Through Innovative Collaboration Enhanced by Educational Technology

MANUAL FOR METHODOLOGICAL APPROACHES

Parts of this Intellectual Output is co-funded funded with support from the European Commission through the project *Learning Through Innovative Collaboration Enhanced by Educational Technology* (iLikeIT2) (Nr. 2020-1-NO01-KA203-076434).

For further information and contact, please visit our website at https://ilikeit2.eu/

Co-funded by the Erasmus+ Programme of the European Union

iLikeIT2

Learning Through Innovative Collaboration Enhanced by Educational Technology

Partners

COORDINATOR NTNU	**Norwegian University of Science and Technology (NTNU)** Norway https://www.ntnu.no **Tord Mjøsund Talmo:** tord.m.talmo@ntnu.no
fyg consultores	**Instalofi Levante Sl** Spain http://www.fygconsultores.com Aleksandra Staszynska: aleksandra.s@fygconsultores.com
Συνεργασία Ενεργών Πολιτών	**Active Citizens Partnership** Greece http://activecitizens.eu George Bekiaridis: George.bekiaridis@gmail.com
Middlesex University London	**Middlesex University Higher Education Corporation** The United Kingdom https://www.mdx.ac.uk George Dafoulas: g.dafoulas@mdx.ac.uk
cesie the world is only one creature	**Cesie** Italy https://cesie.org Ms. Alessia Valenti: alessia.valenti@cesie.org

Co-funded by the Erasmus+ Programme of the European Union

iLikeIT2

Learning Through Innovative Collaboration Enhanced by Educational Technology

Contributors

Tord Talmo, NTNU

Robin Støckert, NTNU

Alessia Valenti, CESIE

Jelena Mazaj, CESIE

George Dafoulas, MUHEC

Maria Sapountzi, ACP

George Bekiaridis, ACP

Miriam Fernandez, FyG

Joan Ventura, FyG

Table of content

Introduction

In a classroom, it is often difficult to get students involved in the discussion, both with peers and the teachers. This also means that students seldom can raise their voice, discuss, or enhance their analytical and social skills in academic environments. Educational technology (Ed.Tech) and collaborative work have proven to be effective in this setting. By involving students, raising engagement and motivation, enhancing peer learning, and ensuring easy diagnosis for the student groups when used correctly, the lecturer is given possibilities of facilitating the learning experience in a different and possibly better way.

Collaborative work has the advantages of enhancing social skills, redirecting educational and social strategic goals for the students, and improving the learning environment. By combining many of the advantages found in Ed.Tech, with the advantages found in collaborative work, one can achieve higher learning aims. This manual proposes a methodology designed whilst developing a prototype software, iLikeIT2. Together the software and the methodological approach should be considered as a variation to the traditional group work, where anonymity and written language are focused more than physical contact and verbal expressions.

A main aim for iLikeIT2 is to address 21st Century skills, such as digital skills and collaboration, which is much appreciated in the educational sector. They are also needed. Looking at both UNESCO, EU and OECD strategies one finds consensus that the pedagogical approaches needs to be transformed in order to support the acquisition of these 21st Century skills. Still, little has been achieved on how to teach them, and how to actually include elements like critical thinking, communicative skills, innovation, problem solving and collaboration in especially Higher Education (HE). Ed.Tech promotes to a high degree learner autonomy and creativity when used pedagogically sound. Mainly Ed.Tech can provide exactly the variation to traditional lectures as mentioned above. This means that Ed.Tech can aid in redeveloping conservative learning methods, which is the basis for HEIs into more enquiry and problem-based approaches. New innovative technologies can enhance the teachers' ability to use strategic questioning, capitalize on learners' interest in mobile technologies, utilize social media design relevant and real-world learning activities in order to teach metacognitive skills and build the right relationships for learning. Accordingly, technologies include learners more actively in learning, they emphasize learner-centered models and Ed.Tech promotes learning without borders like time, place and age. Thus Ed.Tech might prove essential in order to cope with new demands from society and working life. In this context developing new tools and methodological approaches, as being done in iLikeIT2, can make a real impact on the educational institutions.

Even if the project Learning Through Innovative Collaboration Enhanced by Educational Technology (iLikeIT2) mainly targets HEI, the methodology and tools developed can easily be adapted to other educational and entrepreneurial sectors. This manual includes three cases refined throughout the project's lifespan. The cases are examples of best practices and can be adapted to all sorts of subjects. In this manual they are directed towards three different levels of the educational system; Vocational Education and Training (VET), High School (Secondary Education) and Higher Education.

iLikeIT2 Overview

The project

The iLikeIT2 project consists of four different Intellectual Outputs, i.e., tangible results free for use for all interested parties. In this strategy the results from the fourth part are to be found. You can access all results at iLikeIT2.eu. We recommend to get an overview before using the results in real-life scenarios. The following results are available by 2024.

IO1 – Report

In the first phase, the consortium researched available tools in the digital market to see which functionalities might be useful for creating more collaboration in a learning environment using digital tools. This resulted in a report including viable tips for using and utilizing digital tools when working collaboratively.

The report can be found at https://ilikeit2.eu/wp-content/uploads/2022/03/iLikeIT2_IO1_2.0.pdf.

IO2 – Pedagogical Strategy

In the second phase of the project, the consortium created a pedagogical strategy for using digital tools, especially response tools, in collaborative settings. The strategy aims at including all aspects needed to be considered in order to succeed with the implementation of these types of tools in the learning environment. The strategy includes both a pedagogical framework, a discussion considering different areas in consideration; related to various levels, different types of education and different delivery moods, as well as concrete examples and cases on how to start using digital tools in your learning environment. This manual can be found online at https://ilikeit2.eu/wpcontent/uploads/2023/10/final_longstrategy_ilikeit2.pdf

IO3 – iLikeIT2

Using the results from the first phases, one of the main aims in iLikeIT2 was to create a new and innovative software, built on the ideas of response tools, but including opportunities for students to collaborate and interact before answering the questions/cases. This software, iLikeIT2, enables instructors to create groups and facilitate learning in an easy and time efficient way.

Information about the software and how to gain access can be found online at https://ilikeit2.eu/results/

IO4 – Methodological guidelines

Technology is nothing without methodology, thus the project also provides methodological guidelines for using our software in collaborative settings. The guidelines are illustrated, recorded, and exemplified through different cases, and may be downloaded as a PDF. The methodological approach is based on the findings in the previous phases of the project. We recommend looking at the examples to best succeed with the implementation. The proposed methodology is presented in this manual, and the project also provides a poster to be hung on walls in five different languages that illustrates this methodological approach. All materials are published at https://ilikeit2.eu/results/

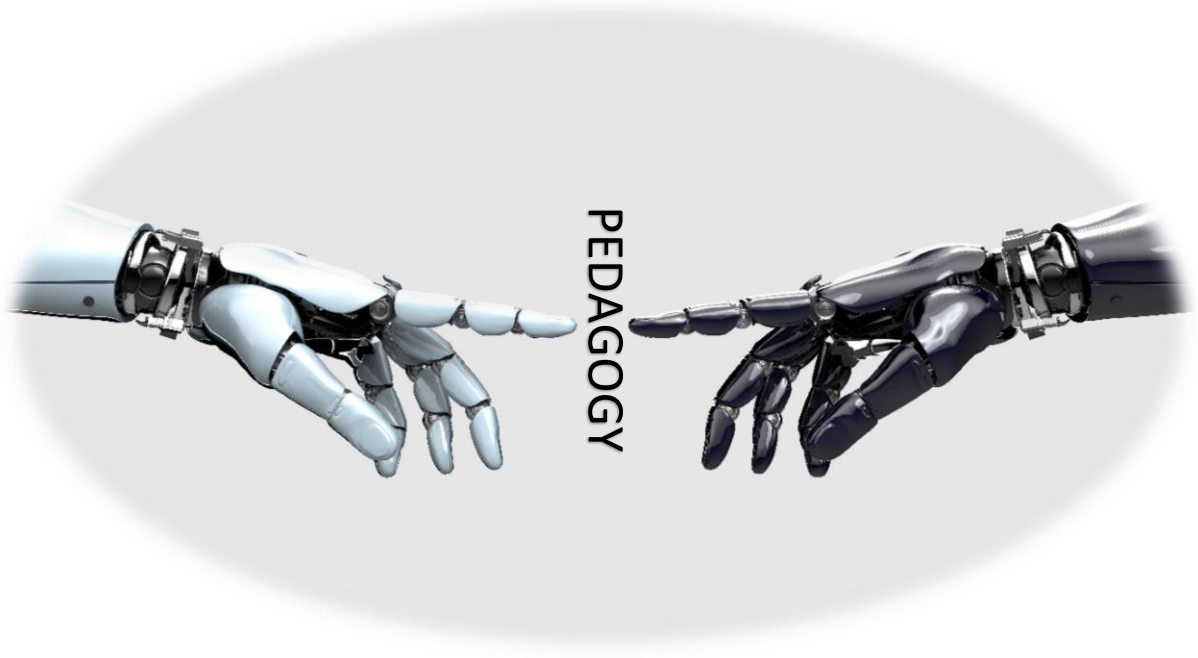
The manual

In this manual we will propose a methodological approach that suits the software iLikeIT2 developed during the project. Pedagogy always comes first, meaning that the methodology is designed without considering the possible pitfalls when implementing and designing new and innovative technology. The focus is therefore on the pedagogy applied, the type of assessment of tasks necessary to increase learning outcomes, and how to conduct the actual activity.

The methodological manual is structured in five parts. After an introduction of the project, previous results and this manual, we focus on practical cases. There are three cases included in this manual, that function as best practices for iLikeIT2 in different levels of the Educational system. These are all thoroughly explained, and argued for with general comments on pedagogy, assessment, grouping, technical specifications and some other relevant aspects.

Considering iLikeIT2 is new technology, and a brand-new software developed, it is necessary to comment on some technicalities that need to be considered when implementing the system in real-life scenarios. These will all relate directly to the cases introduced and recommend best practices as well as introduce ways of using the system in the best way possible with the functionality included.

In the end of the manual, the consortium anchors the methodology in seven steps. These are also presented in a training video from a real-life scenario, published on the website iLikeIT2.eu.



Cases

In this section we will present three best practices for using iLikeIT2. Throughout the project the cases have been designed, piloted and refined continuously. For this manual we have expanded the cases into three different phases when doing collaborative work, called pre-phase, activity-phase and post activity. For each of the phases both how (HOW) to do the proposed activity (WHAT) and why it should be done in this way (WHY) is explained. Additionally, we have included an example of an actual activity (EXAMPLE), that is merely to show how it could be done. All cases can be modified and adapted to different teaching styles and subjects.

The cases are refined to three different areas of the educational system. Case 1 is modified to fit an ordinary VET-class, case 2 is designed for High School environments and case 3 for Higher Education. This is mainly because these are the levels where the cases are piloted, and therefore adjusted to.

Case 1

Methodological approach case 1.

Vet. Collaborative learning. How to use educational technology in a maintenance class?

- **Type of pedagogy applied:**

The exercise follows a collaborative learning approach, where students work in small groups to solve problems and discuss their solutions among themselves. This approach encourages active student participation, promotes interaction and knowledge exchange among peers, and fosters the development of problem-solving and teamwork skills.

- **Type of assessment:**

The assessment used in this exercise is a combination of formative and summative assessment. Formative assessment occurs during the problem-solving process as students discuss and share their solutions with each other and submit them to the teacher for review. Summative assessment takes place through the submission of written solutions and a self-assessment test. This combination allows for the evaluation of both the problem-solving process and the final outcome.

- **Group division:**

Students are divided into groups of 5 people. This group structure supports collaboration and teamwork, allowing students to support each other, share ideas and different approaches, and promote active participation from all group members. Ideally the teacher allocates members to the groups, to ensure that each group involves at least one problem solver.

- **Pedagogy-space-technology interaction:**

The exercise utilizes iLikeIT2 as a means of communication and collaboration between the teacher and students. This tool enables students to view maintenance videos, discuss, and submit their solutions to the teacher. Technological interaction facilitates access to necessary resources, promotes real-time communication, and allows for efficient solution submission. The inherent response tool provides the teacher with an opportunity to monitor and assess the students' knowledge throughout the whole process.

- **Other relevant aspects:**

The video-based approach provides practical and relevant context for students, linking theoretical learning with real-world maintenance situations.

Group discussion and written solution submission allow students to develop oral and written communication skills, as well as skills in argumentation and justification of their solutions.

The provision of a self-assessment test allows students to reflect on their own learning, assess their understanding, and identify areas where they may need further practice or study.

The feedback provided by the teacher through solution review and the loud discussion with groups enables students to receive constructive feedback and gain from the approaches and solutions of other groups.

PHASE	WHAT	HOW	WHY	EXAMPLE
PRE-PHASE	**Prepare a session in iLikeIT2**	Log into the system Make a name for the session Prepare the different rooms and upload there the videos and questionnaire. Save for later	To be prepared and have everything uploaded before going into class	Name the session something that is easy to remember, and that relates to the topic, for example CollaborativeLearning2023
	Start the system	Start the system on your designated computer. Choose your session and click run When a window appears asking if you are moderating the session, click yes Log in with your user name and password.	Teacher is in control. All students logged in to the system before the work begins. All videos and documents pre-made are saved in the system	ilikeit2.mdx.ac.uk. Choose CollaborativeLearning2023 Insert Username and password
	Defining learning aim for the activity	Explain to the students that, by using the ILikeIT2 tool, they will learn how to solve some maintenance cases and why is it important to use the e-learning tool.	Transparent communication helps manage expectations and ensures that students are aware of the rationale behind their assignments. The clearer the learning aim, the more chance of success. It also makes it easier to explain to the students why this is a good tasks, and/or necessary to do.	Explain that these cases will be solved through a video shared through ILikeIT2 showing a maintenance problem and they will have to use the “rooms” created to share the solution with the trainer.
	Divide into groups	In iLikeIT2 the students are automatically directed to random groups of five.	Pre-making groups allows the teacher to define group roles and utilize different strengths in the student mass.	Groups of five
	Set the time scale for the collaborative work	Decide on how much time you want the students to use, both for discussion, but also for sending their answer and full-filling the self-assessment. Set the selected time in the system	Implementing Ed. Tech in the collaborative work allows for easier and more seamless changes between different scenarios. This allows for allocating time in a different way than in analogue teaching, and also for saving time in between tasks.	45 minutes in total.

PHASE	WHAT	HOW	WHY	EXAMPLE
	iLikeIT2 Setup	Confirm that students have access to the iLikeIT2 platform and are familiar with its features.	Smooth and trouble-free access will enhance the overall efficiency and effectiveness of the exercise.	Give students link to the iLikeIT2 session
	Define room structure	Decide if the session is online, f2f or hybrid. Decide if the students are to sit in the groups divided in the system, or random. Define how the students will interact during work.	Ed.Tech allows for different modes, and therefore it is possible to decide hybrid solutions for the collaboration.	Hybrid session Students watch the video and discuss the solution in the online room. Communication via chat and face to face.
ACTIVITY PHASE	**Present the learning aims**	Explain why you are doing the activity, and why you are using this system to the student group. Explain what the students should learn after the session	Motivation Engaging the students Defining a context	Important to stress the fact that the students need to discuss the problem showed in the case internally before approaching the teacher and other peers with the solution.
	Provide instructions	Inform all students about the progress and framework for the work. Introduce the case and explain about the type of assessment intended to use.	Clear understanding of the technology used is crucial to motivate students and enhance their autonomy and application of knowledge	The groups have the ability to watch the video several times, and use chat to communicate internally. They may access different rooms to look at other solutions and provide their own.
	Hand out materials	Distribute all necessary material, both online and in hand.	It is recommended to utilize the inherent capabilities of the chosen system to ensure equal access to materials for all students	A video shared with all students.

PHASE	WHAT	HOW	WHY	EXAMPLE
	Facilitate the progress	Be present and responsive to student questions, monitor time and inform students about the remaining time, offer additional materials and insights as needed, facilitate the plenary discussion Use the internal response technology in order to monitor the progress, and interrupt the collaboration if students are not learning what they need.	The teacher's expertise is essential in a diverse student group, and they must swiftly adapt and guide the students in the right direction when things deviate from the plan	Important for the lecturer to attend all rooms, and listen in to the discussions. Make sure that instructions are given if and when the students deviate from the time-scale, the subject or other.
	Aid in technical difficulties	All Ed.Tech is dependent on the technology to some degree. Ensure back-up-plan. Aid students if problems	Technology that doesn't work is obsolete, and will not be used.	
POST ACTIVITY	**Pedagogical approaches adjusted**	Utilize the students answers for feedback. Explore intriguing comments or situations in the discussions. Utilize the self-assessment tool to further enrich the learning experience.	Technology evolves, requiring pedagogical adjustments. Cases may not go as planned, but improvements are always possible.	Dependent on the how the collaboration works. Post a question in iLike about how the experience was.
	Evaluate	Evaluate all phases. Focus on the case structure, and to what degree the learning aims were achieved. Include students self-assessment.	Every session should always be evaluated and improved	Save the answers to the post-question, and compare over time.
	Statistics and theory	Save results and cases for future use. Evaluate sessions and make improvements for subsequent use. Compare results over time to track progress.	Crucial for case development, teacher's expertise, tool advancement, and professional growth	Especially interesting to see if the responses deviated over time. This could mean that the video example needs to be adjusted over time.

Case 2

Methodological approach case 2.

High school: Successful communication. How to debate in a good way?

- **Type of pedagogy applied:**

Inquiry based learning. It fosters active engagement, critical thinking, and problem-solving. Encouraging students to inquire about successful communication enhances their understanding and allows for a more participatory learning experience.

- **Type of assessment:**

Not applicable

- **Group division:**

Embrace the randomly generated groups by the iLikeIT2 tool, ensuring diverse perspectives and collaboration among students with different backgrounds and experiences. Group division promotes inclusivity and diversity in discussions, exposing students to a variety of viewpoints. Periodically assess the effectiveness of this method and be open to adjustments if needed.

- **Pedagogy - space – technology interaction:**

Integrating iLikeIT2 into the learning process enhances accessibility, facilitates collaborative work, and provides opportunities for multimedia-rich content. This aligns with the principles of inquiry-based learning, promoting exploration and interaction in both physical and virtual spaces.

- **Other relevant aspects:**

- Creating a positive and inclusive atmosphere encourages active participation and open communication. Students are more likely to engage in inquiry-based learning when they feel their contributions are valued and respected.
- Integrate real-world examples into the learning materials to provide practical applications of theoretical concepts.

PHASE	WHAT	HOW	WHY	EXAMPLE
PRE-PHASE	**Prepare a session in iLikeIT2**	Log into the system Make a name for the session.	To be prepared before going into class	Name the session Communication1
	Start the system	Start the system on your designated computer. Choose your session and click run When a window appears asking if you are moderating the session, click yes Log in with your user name and password.	Teacher is in control. All students logged in to the system before the work begins.	Access ilikeit2.mdx.ac.uk. Choose Communication1 Insert Username and password
	Define the learning aim for the activity	Defining learning aims provides a clear roadmap for designing and evaluating the effectiveness of the activity. Each aim corresponds to a specific skill or knowledge area that, when achieved, contributes to the overall development of students' academic writing capabilities.	Transparent communication helps manage expectations and ensures that students are aware of the rationale behind their assignments. It also sets the tone for a positive and collaborative learning environment.	Be sure to inform the students about the aims. Focus especially on the need for good coordination and communication within iLikeIT2
	iLikeIT2 Setup	Confirm that students have access to the iLikeIT2 platform and are familiar with its features	Smooth and trouble-free access will enhance the overall efficiency and effectiveness of the exercise	Give students link to the iLikeIT2 session
ACTIVITY PHASE PART 1	**Explanation of the Activity – Clearly articulate the purpose and structure of the activity**	Provide a brief overview, highlighting the importance of effective communication and the steps involved in the exercise. Use engaging and relatable examples to capture students' attention	Setting clear expectations ensures that students understand the goals of the activity, fostering active participation and focus.	In this case, focus especially on the ability each student has to argue their own opinion internally.

PHASE	WHAT	HOW	WHY	EXAMPLE
	Think for Yourself - Prompt students to individually think about 3 keys to successful communication.	Ask students to share their three key words in iLikeIT2 through private messages to the teacher. Encourage them to reflect on personal experiences and observations. Copy the answers in a document.	Individual reflection promotes independent thinking, allowing students to consider their unique perspectives on successful communication.	One list of keys to successful communication shared online (share screen). Ask students to not disturb their peers when they finish.
	Display the collected keys to successful communication on the screen for all participants to see.	Share your screen on iLikeIT2, showcasing a document where the keys are listed. Navigate through the shared content	Sharing the results ensures that all participants have access to the collected ideas, and facilitates a group discussion based on the shared insights	One list of keys to successful communication shared online (share screen).
	Facilitate a round of speeches	Establish a structured format for speeches, with each student given a specific time limit. Encourage active listening and note-taking among peers..	Facilitation helps manage the time allocated for each speech and ensures that the content remains relevant and aligns with the learning objectives of the activity.	Example: Introduction (2 min) Welcome and set the context for the speeches. Example: "Good afternoon, everyone! Today, each member of our group will share 3 key words related to successful communication. Let's kick things off with our first speaker."
	Round of Speeches	Students share their key words and briefly explain their choices. They can share the screen on iLikeIT2 if they prepared a PPT/Word display of their key words.	Public speaking develops communication skills, and sharing diverse perspectives creates a rich learning environment	Example: Speakers (6 minutes each): • Key Words: [List the 3 key words] • Explanation: "My first key word is 'Clarity.' In communication, clarity ensures that the message is easily understood. For instance, using simple language and avoiding jargon enhances “clarity”

PHASE	WHAT	HOW	WHY	EXAMPLE
	Summarize key insights from the individual reflections and speeches.	Highlight a) what they understand by successful communication; b) show on screen everything they have said. Connect these insights to the overall theme of successful communication.	Conclusions provide a moment of reflection, helping students consolidate their thoughts and prepare for the next phase of the activity.	Example: "Thank you, everyone, for sharing your insightful key words. Let's take a moment to reflect on the diverse perspectives within our group."
ACTIVITY PHASE Part 2	**Explanation of the next phase**	Clearly outline the transition to the open debate, emphasizing the importance of collaborative discussion and group consensus. Provide a structured framework for the debate. Encourage active participation, listening, and respectful disagreement.	Setting expectations for the next stage helps students understand the progression of the activity and prepares them for the upcoming collaborative phase.	While showing the reasons with arguments given in the last session, open a debate on successful communication.
	Divide into groups	In iLikeIT2 the students are automatically directed to random groups of five.	Group work fosters collaboration and allows students to benefit from a range of perspectives. It promotes effective communication, critical thinking, and the exchange of ideas, enhancing the overall learning experience.	Groups of 5
	Vote 1	Pre-made question in iLikeIT2. Open the question, and ask the students to answer individually. Qustion related to the subject, and the importance of different rhetoric. Five alternatives to be voted over.	Allowing students to actively participate in the lecture. Via responding they are participating in deciding what is important when discussing.	Q: “What is the most important in order to convince you to change your mind in a debate?” A: Pathos B: Logos C: Etos D: Friendship E: Creativity

PHASE	WHAT	HOW	WHY	EXAMPLE
	Open debate where students discuss and assess key words in groups.	Everyone should debate and conclude on only 3 of the things. They should say pros and cons. Discussions in groups within iLikeIT2.	Open debate promotes collaborative learning, allows students to explore diverse viewpoints, and fosters negotiation and consensus-building skills.	Divide randomly in groups in iLikeIT2. Ask students to take turns, and use both oral speech and chat.
	Facilitate a structured and inclusive debate where students discuss and assess the key words for successful communication.	Organize the debate into structured rounds, each focusing on specific aspects of the key words. Encourage participants to assess the key words provided, and in groups agree upon a definition.	Structured rounds help ensure that all key points are thoroughly discussed, allowing for a comprehensive exploration of different viewpoints	Plenary session
	Conduct a Plenary Discussion	Ask each group to share their group definitions and insights. Ask open-ended questions to stimulate discussion.	Concluding with a plenary discussion helps synthesize the group discussions, reinforces key concepts, and provides closure to the activity	Example: Moderator should ask questions such as: • And why do you think your partner is not right? • And why do you prefer one action to the other? • What if it is a public place? • How likely is it that…? Can you give me an example of what you are saying?
	Vote 2	Pre-made question in iLikeIT2. Ask which arguments was most convincing. The five same alternatives as in Vote 1	Important to follow up the initial vote. Focus on changes in opinion, and allow the students themselves to understand why some arguments are better than the others.	Q: “What is the most important in order to convince you to change your mind in a debate?” A: Pathos B: Logos C: Etos D: Friendship E: Creativity

PHASE	WHAT	HOW	WHY	EXAMPLE
POST ACTIVITY	**Conclude the activity with theoretical explanations and terminology**	Introduce key theoretical concepts. Illustrate how theoretical concepts apply to real-world communication scenarios. Use examples to bridge theory and practice. Encourage students to reflect on the evolving understanding of successful communication.	Discussing theoretical concepts encourages participants to think critically about communication dynamics, helping them become more conscious and intentional communicators	Explain classical rhetoric. Focus on diverted ethos. Explain why it is important to include all the argumentation forms in order to convince participants

Case 3

Methodological approach case 3.
Higher education, academic writing

- **Type of pedagogy applied:**

Peer Instruction; Active Learning. Actively involving students in an assessment process makes the classroom experience more engaging as it encourages students to be more aware of their level of performance and develop a deeper understanding of the assessment criteria, which will improve their future performance in academic writing. Peer Instruction provides opportunities for students to analyse, question, and think deeply about the evaluation process they are subject on. It exposes students to diverse perspectives, and mirrors real-world collaborative scenarios they may encounter in their future (academic) careers.

- **Type of assessment:**

The teacher provides feedback on both the initial and revised votes, emphasizing specific aspects such as argumentation, validation, and reliability. This feedback is meant to guide students in refining their assessments, creating an iterative learning process.

- **Group division:**

The iLikeIT2 tool performs random group assignments. Random grouping ensures diversity in perspectives and promotes a collaborative learning environment. Periodically assess the effectiveness of this method and be open to adjustments if needed.

- **Pedagogy - space – technology interaction:**

Technology enhances the pedagogical approach. Consider incorporating multimedia elements, interactive platforms, or collaborative writing tools to further engage students in the assessment process. Ensure that the technology used aligns with the learning objectives and provides a seamless integration of active learning strategies.

- **Other relevant aspects:**

Consider implementing structured guidelines or templates to facilitate constructive and specific feedback. Provide examples of effective feedback to help students develop this skill.

PHASE	WHAT	HOW	WHY	EXAMPLE
PRE-PHASE	**Prepare materials**	Decide on the student text to be shared. Select a text that exemplifies the criteria you want to focus on. Craft clear and concise instructions. Develop a rubric that aligns with the learning objectives and highlights specific criteria for assessment. Print the student text for all participants.	This ensures that the materials are relevant, representative, and aligned with the learning outcomes of the course	One written essay printed for all. Instructions in a document shared online (share screen) One rubric for assessment shared online (share screen)
	Prepare a session in iLikeIT2	Log into the system Make a name for the session Prepare 2 questions with alternatives for the grades Save for later	To be prepared and have everything uploaded before going into class	Name the session AcademicWriting1
	Start the system	Start the system on your designated computer..Choose your session and click run When a window appears asking if you are moderating the session, click yes Log in with your user name and password.	Teacher is in control. All students logged in to the system before the work begins.	Access ilikeit2.mdx.ac.uk. Choose AcademicWriting1 Insert Username and Password

PHASE	WHAT	HOW	WHY	EXAMPLE
	Define learning aim for the activity	Defining learning aims provides a clear roadmap for designing and evaluating the effectiveness of the activity. Each aim corresponds to a specific skill or knowledge area that, when achieved, contributes to the overall development of students' academic writing capabilities.	Transparent communication helps manage expectations and ensures that students are aware of the rationale behind their assignments. It also sets the tone for a positive and collaborative learning environment.	Example: “Understanding assessment is crucial for students to produce work that meets academic standards. It empowers them to engage more critically with their own writing and that of their peers.” “Strong argumentation is a fundamental skill in academic writing. Developing this skill enhances students' ability to convey ideas persuasively and coherently.”
	Divide into groups	In iLikeIT2 the students are automatically directed to random groups of five.	Group work fosters collaboration and allows students to benefit from a range of perspectives. It promotes effective communication, critical thinking, and the exchange of ideas, enhancing the overall learning experience.	Groups of 5

PHASE	WHAT	HOW	WHY	EXAMPLE
	Set the time scale for the activity	Decide on how much time you want the students to use for individual work, discussion and voting, but also for Q&A. Set the selected time in the iLikeIT2 system.	A set timeframe allows for a focused and efficient execution of the activities, ensuring that each stage receives adequate attention within the specified timeframe.	60 minutes in total. Example: • Distribution of Documents, Individual Reading and Vote for Grade (15 minutes) • Rubric Explanation by Teacher (10 minutes) • Group Discussion (15 minutes) • Vote for Grade (10 minutes) Plenary Assessment by Teacher (10 minutes)
	iLikeIT2 Setup	Confirm that students have access to the iLikeIT2 platform and are familiar with its features	Smooth and trouble-free access will enhance the overall efficiency and effectiveness of the exercise	Give students link to the iLikeIT2 session.
ACTIVITY PHASE	**Distribution of Documents**	Distribute the three documents (text, instructions, rubric) to each student. Distribute the printed documents in class, make students access the others shared online.	Using iLikeIT2 allows for bettered coordination of the collaborative work, especially considering distribution of materials.	Share instructions on projected screen, hand out printed rubric and share the text internally in iLikeIT2.

PHASE	WHAT	HOW	WHY	EXAMPLE
	Individual Reading **- instruct students to read the academic writing.**	Emphasize the importance of personal assessment without discussion with peers.	This step allows students to form their own opinions about the text, promoting independent thinking.	Each student are told to make up their individual opinion about the text, and grade it.
	Vote 1: **Individual Grading - Instruct students to grade the academic writing using iLikeIT2.**	Clearly communicate the expectations for the initial grading. Emphasize that the focus should be on individual assessment based on personal understanding and without discussing with peers. Pre-make a question in iLike with five alternatives.	This step allows students to form their own opinions about the text, promoting independent thinking..	Example: “Content & Understanding» • Excellent (5) • Good (4) • Satisfactory (3) • Needs Improvement (2) • Inadequate (1)” Each student vote individually
	Rubric Explanation - The teacher explains the rubric and highlights key elements and criteria.	Clearly present the rubric, explaining each criterion and providing examples	Understanding the rubric is essential for students to focus their discussions on specific elements and align their evaluations with the teacher’s expectations.	Example: “Content & Understanding - Excellent (5): Demonstrates a deep understanding of the topic. Arguments are insightful, well-developed, and supported by evidence from credible sources.”

PHASE	WHAT	HOW	WHY	EXAMPLE
	Q&A Session - Open the floor for questions	Encourage questions and discussion to ensure students understand the assessment criteria.Lead the plenary discussion, and make sure all good arguments/answers are known	Understanding the rubric is essential for students to focus their discussions on specific elements and align their evaluations with the teacher's expectations.	Example: "Before we start, does anyone have questions about the task, the rubric, or the overall process? Feel free to ask now so we can address any uncertainties."
	Group Discussion through online chatting -Students discuss the text using iLikeIT2, focusing on the elements in the rubric.	Encourage students to engage in meaningful discussions about the text. Stress the fact that the group should reach an agreement based on the best arguments with proof in the subject text	Group discussions promote collaborative learning, allowing students to gain insights from diverse perspectives and refine their understanding of assessment criteria.	Example: "In this online discussion, our main focus is to collaboratively assess the academic writing using the rubric provided. We want to delve into the key criteria and have a constructive conversation about how each element is represented in the text."
	Support students	Address any technical aspects of the online platform or tools that students might find challenging.	Important that all students are comfortable and safe when using Ed.Tech	Example: "If you're unsure how to use the commenting features or if you encounter any technical difficulties, please reach out. We want to ensure that everyone can actively participate in the discussion."

PHASE	WHAT	HOW	WHY	EXAMPLE
	Vote 2: **Revised Grading and Voting - After the group discussion, students vote again for the grade using iLikeIT2.**	Instruct students to reconsider their initial grades in light of the group discussion. Emphasize the importance of critical thinking and open-mindedness	This step encourages reflection and refinement of individual opinions based on the insights gained from the group discussion, fostering a deeper understanding of assessment criteria.	Inform students that it is a common grade that is the final aim of the assignment. Instruct them that it is the good arguments based on the reading that should decide the final grading
POST ACTIVITY	**Plenary Assessment and Feedback by Teacher - The teacher assesses the text in a plenary session.**	Discuss both votes, argumentation in the text, included validation and reliability for the argument. Offer constructive feedback on both the content and the grading process	This final step helps students understand the teacher's perspective, provides closure to the exercise, and reinforces the learning objectives.	Example: "Now, turning our attention to the argumentation in the text, you highlighted the use of relevant evidence and logical progression of ideas. However, there were instances where some arguments could benefit from more in-depth analysis. Let's explore specific examples and discuss how the argumentation could be further strengthened."

Technical specifications, tips and tricks

In this section we will show the functionalities and the ways of using the software iLikeIT2 in the best way possible. All the phases can benefit from some tips and tricks on implementation of the iLikeIT2-software. We have previously in the project researched and tested different functionalities (IO1: Guidelines to enhance the quality of Collaborative work through Ed.Tech) that might add extra value to collaborative work, and discussed with instructors, students and others (IO2: Pedagogical strategy for implementing Educational Technology in the classroom) what works best when introducing Ed.Tech in these environments. All of these results can be found at iLikeIT2.eu. This section is therefore directed solemnly towards functionality found in iLikeiT2, not considering what could be useful of other tools. All functionality and how to use iLikeIT2 is presented in the technical report, available at iLikeIT2.eu.

Pre phase

When using Ed.Tech the pre-phase will always be the most important for the technology. This is where you make sure that everything works, and the phase where you define what type of learning should happen.

Before entering the learning stages, the teacher needs to prepare a session in iLikeIT2. Normally you would do this in your office. One can choose between creating a unique session for every time/case, or to have one session throughout for example a whole study year. There are advantages with both, but we recommend making one session because of the possibility to extract statistics from the whole year and improve next year from these. Using the same session also allows you to keep saved cases and questions within the system. Make sure you create a session name that is easy to remember, since you have to log into the same session from every new computer. Also allow every computer you use to remember your username and password.

Most sessions in iLikeIT2 will have some materials prepared for the students to work with. In iLikeIT2 you have the possibility to share the teachers' screen, share only documents or allow the students to share their screen within the group. These are all coordinative advantages for a collaborative work, and we recommend using them to the fullest. In an ideal setting, in f2f-teaching, one can share one document on projected screen. This should be the one that you most often work with in plenary sections. Additionally, one can share one document to the group digitally and have one hand-out. Note that when students log out from the system, the document will disappear from their screens, and you will have to share it again.

iLikeIT2 is programmed to divide students logged in into groups of five. Groups are selected randomly by default. It is not possible to manually set groups, meaning that the system cannot be used for continuous evaluation of groups over time. Time scaling automatically starts at 1 minute working time for responding to a question. The time can be set differently when adding a question to the system. Remember that you can save the questions and reopen them. You will still be able to adjust the time when launching a question for the second time.

There are some possibilities to extract statistics from the system. This is especially connected to time spent on each question, and how long students are logged on to the session. If statistics like these are interesting to you, make sure you design the case in a way that provides real results from the statistics obtained.

One of the advantages with iLikeIT2 is that it is easy to use in different room-structures, i.e. f2f, hybrid or online environments. Make sure you decide on the environment you want to use when preparing the session, and adjust time scale, type of questions and materials to be used accordingly.

Activity phase

In order to succeed with collaborative learning, it is necessary to always present the learning aims. This is even more important when introducing Ed.Tech. In both a f2f and hybrid environment, students have the opportunity to both communicate orally and via the chat function in the system. When performing the activity, the teacher will have an intention with the group communication, and it is recommended to instruct the students how the communication is intended to be.

During the collaborative work, it will always be necessary to interrupt and explain some parts in plenary to save time, and clarify common mistakes. Considering the opportunities provided by iLikeIT2 for coordination of tasks, it is recommended that the teacher shares new documents and/or changes the one projected commonly during one of these periods. Then all students will always have access to the same materials.

Previous research in the project has shown that the teachers position as facilitator is less needed when using Ed.Tech than in collaborative settings without technology. Still, the teacher needs to be present and monitor what is going on. A big advantage in iLikeIT2 is the ability to interrupt all groups in an easy and efficient way. One can post a question to all, with a short time-frame in order to gain attention or check the common understanding in the group as a whole. In this way one can facilitate better learning experiences for all. Note that it is possible to send messages from the teacher in the chat to only one group at the time.

Post-activity phase

Assessment is always important when doing learning activities. Even if there are no obvious functionalities in iLikeIT2 for improving assessment, the system provides the same possibilities as every other response tool. We recommend that the teacher comments on all results from votes during the session, even the “incorrect” ones. Additionally, the voting system allows for the opportunity to look into each group vote, and the comment on discrepancies internally in the group. This can be also be extracted and used for further pedagogical improvement.

The main advantage with using iLikeIT2 in a collaborative setting might be the possibility to extract statistics from the session after it is ended. Monitoring and assessing the time spent, the messages sent and the votes casted can provide useful insight in order to make pedagogical adjustments in the future sessions on the same topic.

Recommendations

The iLikeIT2 software has been developed to increase the understanding and enhance the effects of collaborative work when implementing Educational Technology (Ed.Tech) in a learning environment. The system is user-friendly and it is easy to integrate the cases shown in this document or other varieties into existing lectures. iLikeIt2 is meant to be a dynamic and flexible system where every student is seen and heard, while obtaining the possibility of being anonymous. The voting tool implemented in the system allows for immediate feedback to both teacher and students, which makes it easy for everyone to monitor the group's progress and identify problem areas.

To utilize the system and the inherent advantages found in Ed.Tech, one needs to focus on the didactical approach. When working with iLikeIT2 the teacher will typically provide a first case, a context and set the task the learners should do. The advantages provided by the system is mainly connected to distribution of materials, online communication, coordination between members in the group and materials, immediacy in responses and the ability to collect statistics after the work-period.

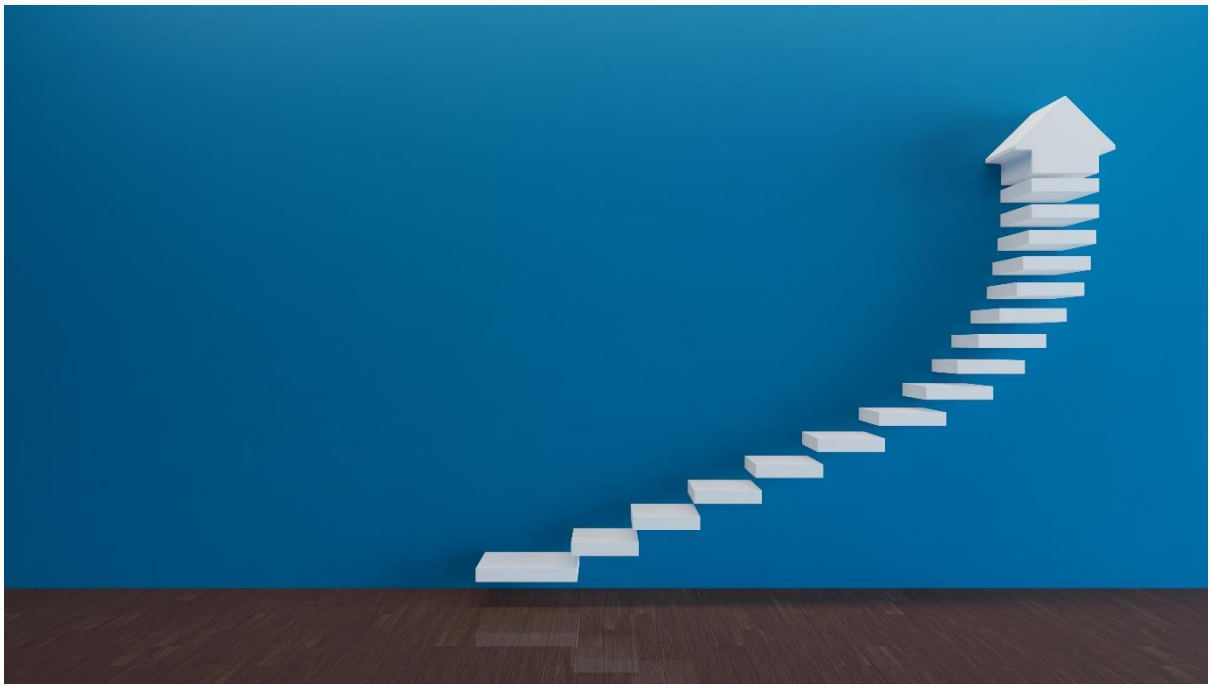
A typical case should therefore be designed in 7 steps:

1. **Conceptualizing the theoretical framework for the case.**
    a. **Theoretical**
    b. **Plenary**
    c. **Instructor lead**
2. **Distributing materials for all group members**
    a. **Online**
    b. **Projected screen**
    c. **Hand-outs**
3. **Allowing for individual work with the case at first**
    a. **Division into smaller tasks**
4. **Collecting individual answers if interesting for the case**
    a. **Individual vote to create engagement and motivation**
5. **Allowing for collaborative work on the case provided**
    a. **Utilizing communication channels**
    b. **Dividing groups according to learner roles**
    c. **Common focused screen**
6. **Collecting collaborative votes if interesting for the case**
    a. **Groups votes**
    b. **Find discrepancies inside the group**
7. **Summarizing the case, and emphasizing differences in results when collaborating.**
    a. **Explaining in summarised form the correct answers**
    b. **Explaining the incorrect answers**

Depending upon the answers provided by the students, both individually and in collaboration, the instructor will have a multitude of follow-up activities based on these results. This will make it easier for the students to consolidate what has been taught.

The methodology provided and used in iLikeIT2 will promote further learning as the teacher utilizes the students' answers and engages them in a meaningful way while still maintaining control of the learning process. Through interaction and collaboration with each other, the learners can discuss the tasks with one another and develop a deeper understanding of the subject being taught. The methodology is universally designed and can and should be used in different subjects and at different levels in the educational system.

Since the software encourages the participation and creativity of all students, the engagement and motivation in the class can be enhanced. With this approach the system can complement a traditional approach and help teachers monitor the group's progress while students increase their awareness and assume greater responsibility for their learning process.



WHY

WHY iLikeIT2?

iLikeIT2 has been developed specifically to be used in collaborative settings, with the aim of increasing the learning outcome from the involved students. It therefore includes functionality which has been introduced and tested in pilots base on existing functionality in other tools, feedback from students and teachers and based on research done by experts in different sectors of the educational system.

Secondly the methodology presented in this manual aims at utilizing the strengths found in Ed.Tech, instead of adapting the methodological approach to the software at hand. The methodology is universal, not connected to specific subjects, and mainly focuses on creating good scenarios for coordination, collaboration and communication. Equal attention needs to be given to all the three phases of the approach; pre-phase, activity phase and post-activity in order to maximize the academic effects. This will create several positive effects in the student group, centered around the following points:

- Coordination: Ed.Tech provides an excellent possibility of coordinating group work in an easy and efficient way. This allows for less attention to group roles, and allows more students to raise their voice and express their opinion on matters.
- Communication: iLikeIT2 allows for different channels for communication, and for a way of storing information provided in the discussions that substitute for example taking minutes. It is also designed for both an online, hybrid or f2f-collaborative work, making communication channels multiple.
- Involvement: In a collaborative work it is often one or two participants being more active than others. iLikeIT2 divides students into small groups, ensuring involvement from all. All students are allowed to deliver their answers, thus ensuring that their opinion is heard. The group's responses are clearly displayed for all to see, students as well as teacher, without displaying immediately possible discrepancies within the single group. This provides an arena for defending the individual answer.
- Anonymity: No one outside the group can access the individual votes, it is the group answer that should be the main focus. This gives a voice to students who hesitate to speak up in front of the whole class. It is also wise because this means that the students need to discuss subject matters in the collaborative phase, and argue to get their answer to count.
- Engagement: Students clearly appreciate seeing that both their own as well as the other group's answers are displayed. This increases the engagement in the classroom as the students are curious about the responses. Secondly the individual student gets engaged in their own answer. Once you have decided on a solution, you will defend it in the discussion and the peer learning effect increases.
- Motivation: The fact that students see that all answers are treated will increase their motivation since it's evident that everybody is able to create and respond, however differently. It is also evident that the post-activity, where the teacher addresses both correct and incorrect (if any) answers increase motivation for participation and active learning. Students get motivated by understanding that others think the same way as them, even if it's wrong.
- Ownership: Using the students' results as follow-up cases, or as the main part of the lecture, means that their contributions are important and that they produce matter together. The lecture is not owned by the book or the teacher, it is theirs. This increases the learning effect and the learning environment in the group.