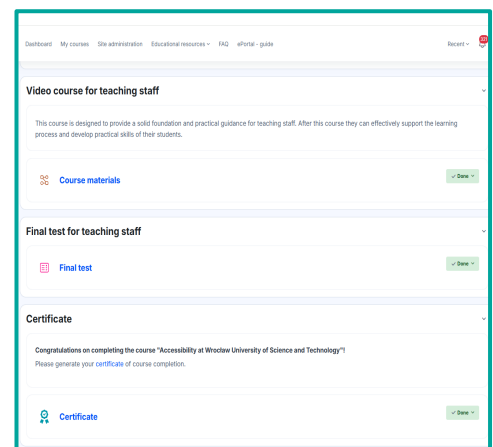




Accessibility for academic teaching staff

Unite! Digital Teaching and Learning
Success Story Report 5/2025

Title	Accessibility for academic teaching staff
Series	"Unite! Digital Teaching and Learning - Success Story Report" edited by Martin Ebner, Katharina Gasplmayr and Sandra Schön
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The series "Unite! Digital Teaching and Learning Success Story Report" was initiated by Cm.2 Digital Campus, led by TU Graz (Martin Ebner), as part of the idea to collect, spread and enhance the possibilities, usages and lessons learned of teaching and learning offers using the federated learning management system Metacampus from 11/2024 until the end of the current Erasmus+ funding period 10/2026. All reports are available under an open license and originally published in the TU Graz repository. Copyright holders are the authors.

Overview

Related Learning/Teaching Short Description	Video course on accessibility
When	September to November 2025
What	Online course
Unite! IT Infrastructure Used	Metacampus
Other IT Infrastructure Used	ePortal PWR – the e-learning platform of Wrocław University of Science and Technology, based on LMS Moodle
Technical feature highlighted (if)	ePortal PWR was connected with Metacampus via LTI
Learning feature highlighted (if)	Self-study course with videos presenting real perspectives on accessibility in higher education
Responsible Task/Project (if)	in cooperation with T2.6 (LTI)
Responsible Unite! Partner	Wrocław University of Science and Technology (Wrocław Tech)
Involved Unite! Partner(s)	-
Responsible Person(s)	Course content – Katarzyna Jach, Renata Forycka (Wrocław Tech); course format & development – Agnieszka Herczak-Ciara (Wrocław Tech)
Contact	katarzyna.jach@pwr.edu.pl , jaroslaw.krysiak@pwr.edu.pl
URL	For academic teaching staff: https://metacampus.unite-university.eu/course/view.php?id=176 For laboratory instructors: https://metacampus.unite-university.eu/course/view.php?id=177
Additional information	Course content was created on the basis of the results of the „Polytechnic of New Opportunities” project, co-financed by the European Union under the European Social Fund. Project number: POWR.03.05.00-IP.08-00-DOS/19.

Description

The “Video course on accessibility” provided by Wrocław University of Science and Technology (Wrocław Tech) aims at introducing its participants to the subject of accessibility in higher education. Based on extensive experience of Wrocław Tech in providing its students with unrestricted access to and equal opportunities for university education, the course is intended to raise awareness of the possible forms of support that can be offered at Wrocław Tech to students with disabilities and special needs. It is primarily designed for academic teachers, however, any person interested in the topic will benefit from the course’s content.

After completing the course, participants will:

- have basic knowledge about various forms of disability and special needs that university students or staff may have,
- understand and be able to identify basic types of disabilities (i.e. related to physical mobility, sight, hearing, mental health, neurodiverse development and also invisible disabilities),
- have gained practical knowledge about diverse support measures that may be implemented to make university education more accessible,
- be able to apply tailored solutions to improve organisation of teaching and learning as well as communication with students in order to make it more inclusive.

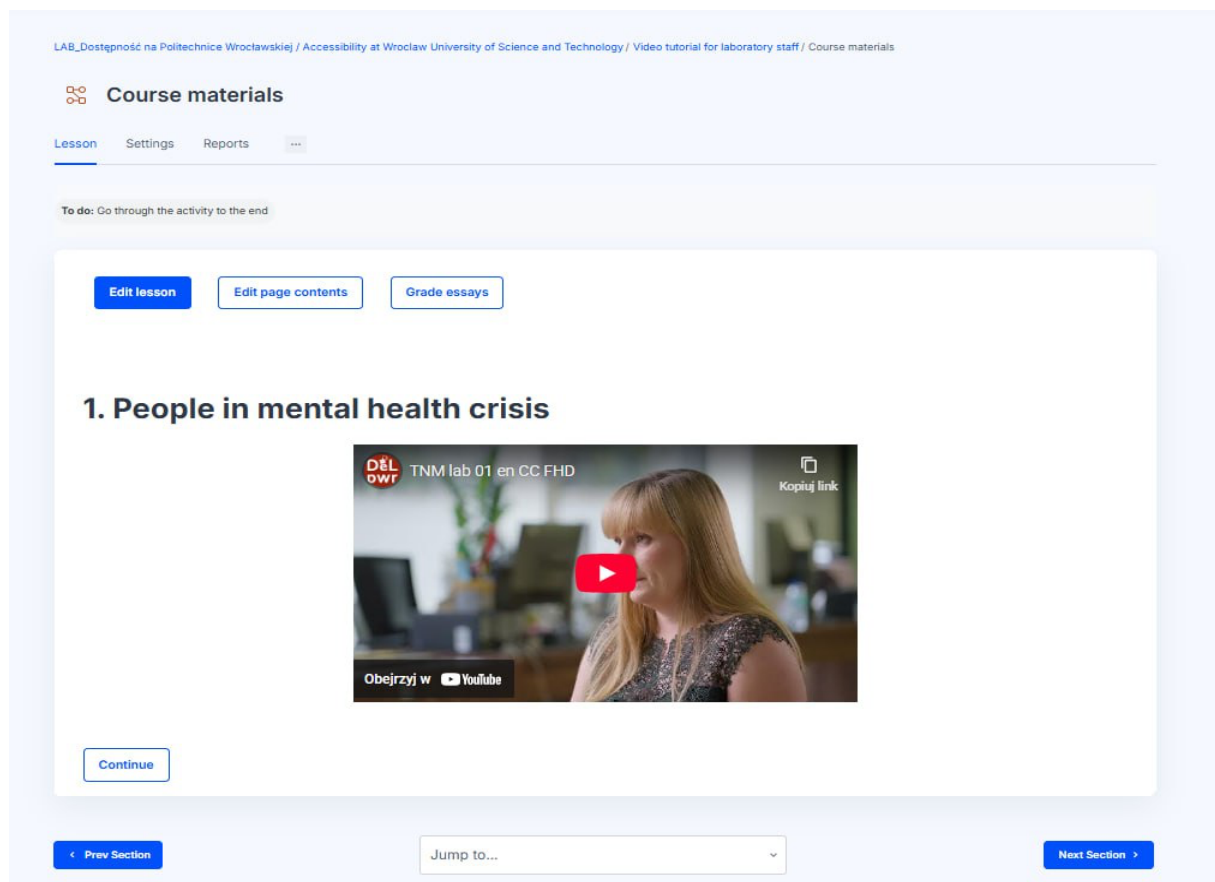


Figure1: Screenshot showing the course video content on metal health crisis

The “Video course on accessibility” was introduced as a pilot self-study (asynchronous) course on the Unite! Metacampus in October and November 2025. The course was intended for academic teachers of Wroclaw University of Science and Technology and aimed at reaching the target audience of 50 academic teachers by the end of November 2025. Future plans include the possibility of further development of the course to share it with a wider audience of the Unite! Alliance. The course was delivered on Metacampus via the LTI technical solution.

Course background

The “Video course on accessibility” was created on the initiative of the Department of Accessibility of Wroclaw Tech and its content was developed on the basis of the video courses that had been created by the department as part of the “Polytechnic of New Opportunities” project, co-financed by the European Union under the European Social Fund. The project aimed at enhancing the accessibility of Wroclaw University of Science and Technology as a higher education institution for persons with disabilities and, drawing on the extensive experience gained through in-person training and webinars, produced 5 video courses dedicated to teaching staff, laboratory instructors, staff of dean’s offices and student service points, as well as administrative and technical staff, including reception and cloakroom personnel.

Thus, the content of the “Video course on accessibility” that was made available on Unite! Metacampus stems from the innovations and initiatives undertaken at Wroclaw Tech over the past several years in order to transform it into a barrier-free and accessible institution. The course showcases the good practices that have been effectively established there and could be used at any higher education institution.

The “Video course on accessibility” was created through cooperation of the Department of Accessibility, whose staff members provided the course content (including the video materials and questions), and the Section of E-learning, which developed the online format of the course.

Course structure

In order to cover as many aspects of university teaching as possible, the course has been divided into two parallel versions – one intended for academic teaching staff in general and the other specifically for laboratory instructors. The content of the course is available in both Polish and English – participants are given the opportunity to choose their desired language of learning at the very beginning of the course. A certificate of completion is offered to those participants who complete all the required steps.

Both course versions are structured identically, with differences in the content adjusted to the intended audience. The structure of the course is as follows:

1. Welcome note and language choice.
2. Course materials.
3. Final test.
4. Certificate of completion.
5. Evaluation survey.

It takes approximately 50 minutes for a course participant to complete the course.

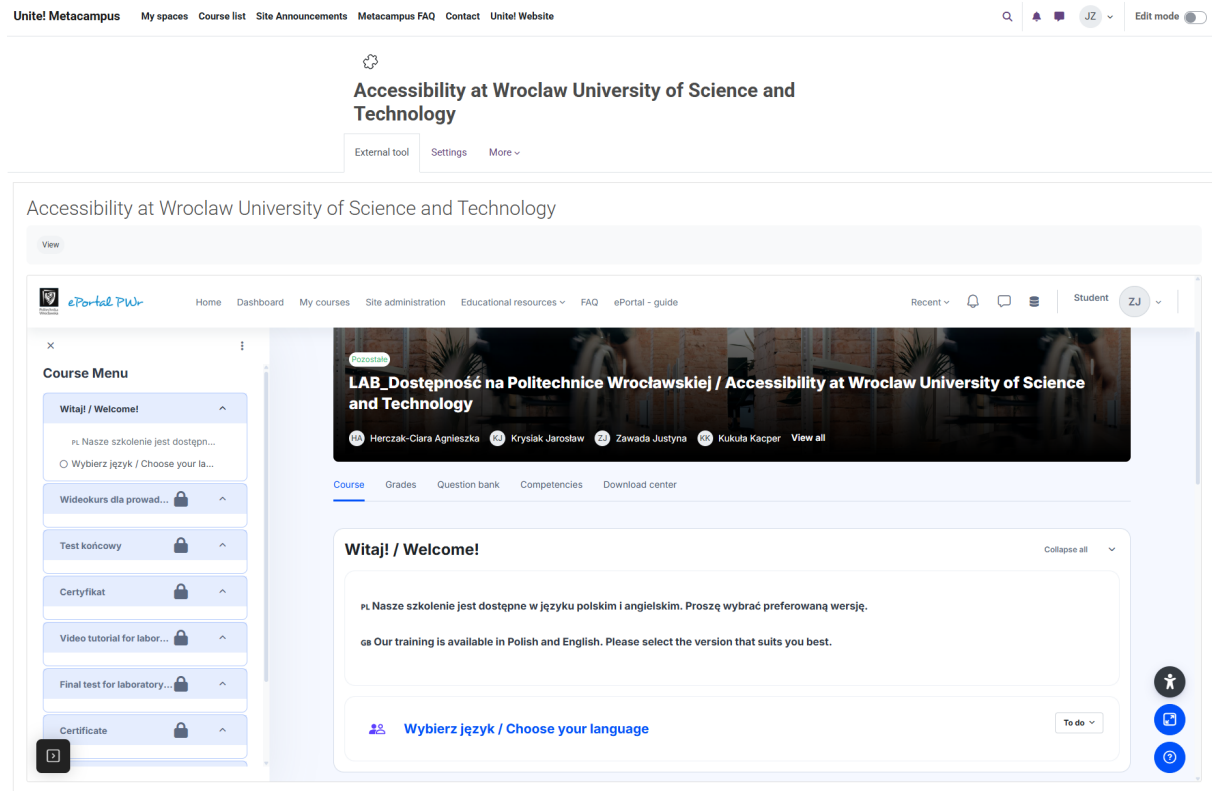


Figure 2: Screenshot showing the layout of the course, with a side menu on the left displaying the list of course activities (language selection, video lesson, final test, certificate)

The course materials are provided in the form of short videos and each of them is followed by one ungraded, yet obligatory, multiple-choice question to check understanding. Participants are required to answer correctly before they can move on to the next video. Each video deals with a different type of disability:

- mental health crisis,
- Autism spectrum,
- blindness and visual impairment,
- deafness and hearing impairment,
- physical disability,
- invisible disability.

The videos feature statements from experts, academic staff as well as students and graduates of Wrocław Tech.

LAB_Dostępność na Politechnice Wrocławskiej / Accessibility at Wrocław University of Science and Technology / Video tutorial for laboratory staff / Course materials

Course materials

Lesson Settings Reports

To do: Go through the activity to the end

Edit lesson
Edit page contents
Grade essays

What opportunities does the teacher of the laboratory classes have to ensure that they take place in an open and friendly manner for everyone – especially for people with special needs, in mental health crisis and for people with disabilities?

- ☐ indicate your openness to people with disabilities
- ☐ discuss the rules of work and course of classes
- ☐ all answers are correct
- ☐ show where the regulations are located

Submit

Prev Section Jump to... Next Section

Figure 3: The video materials were presented as a lesson with knowledge-check questions after each video.

The final test contains 5 multiple-choice questions which cover information presented in all of the videos and aim to consolidate the knowledge gained by the participants. Upon successfully completing the final test, participants become eligible for the certificate of completion of the course.

Key course content

The “Video course on accessibility” by Wrocław Tech focuses on delivering basic knowledge about disabilities in the context of university education. Each video points out specific needs of a particular group of people and the unique feature of the video materials is that the representatives of each group are presenting the various specific needs from their own perspective as students. Moreover, the videos show the solutions implemented at Wrocław Tech such as inclusive study regulations, remedial classes, organisational and psychological counselling, educational assistance, equipment rentals (assistive technology devices, regular laptop computers) as well as the Laboratory of Typhloinformatics and the network of Accessibility Leaders.

The course materials also present inclusive teaching practices and universal learning design so that participants of the course can learn how to:

- provide individual support to students with disabilities that is tailored to their needs,
- communicate in an inclusive and effective manner,
- conduct classes so that students with disabilities can fully participate in them and understand the material covered in class,
- design and organise individual and group assignments as well as examinations so that they do not pose unnecessary challenges to students with disabilities,
- prepare accessible course materials,
- organise accessible learning environment.

Technical Features Used

Challenge

The primary challenge we faced was the integration of our local LMS (ePortal PWr) with Metacampus platform via the LTI. This process mandated close technical coordination and precise configuration on both sides. Crucially, we prioritized ensuring that the training remained easily accessible for the teaching staff of Wrocław Tech, effectively eliminating unnecessary technical barriers. The foundation of this integration rests on retaining the seamless single sign-on (SSO) experience and automatic data synchronization, allowing users to operate smoothly across both systems while ensuring the full integrity and currency of their results.

Technical solution: LTI standard

Learning Tools Interoperability (LTI) is an international standard developed by IMS Global that enables secure and seamless integration between Learning Management Systems (LMS) and external digital tools or learning platforms. It allows users to access external courses or resources directly from their LMS through SSO, while also supporting automatic transfer of learning progress and assessment results back to the LMS.

The main objective of the pilot was to implement a secure and seamless integration between two key LMS Moodle platforms (Metacampus and ePortal), ensuring high availability and data integrity for the teaching staff of Wrocław University of Science and Technology.

- **Functional Goal:** To enable users to access course materials hosted in our local LMS – **ePortal (Tool Provider)** – directly from the **Metacampus platform (Consumer)**.
- **Integration Architecture:** Utilizing the Learning Tools Interoperability (LTI) standard where ePortal serves as the content provider (LTI Tool Provider), and Metacampus serves as the consumer (LTI Consumer).
- **User Authorization:** Using a single sign-on (SSO) mechanism via eduGAIN for logging into Metacampus, which guarantees user authentication before the LTI resource is launched.
- **Data Synchronization:** Ensuring the automatic transfer of progress and results (Grade Passback) from ePortal back to Metacampus to maintain data consistency.

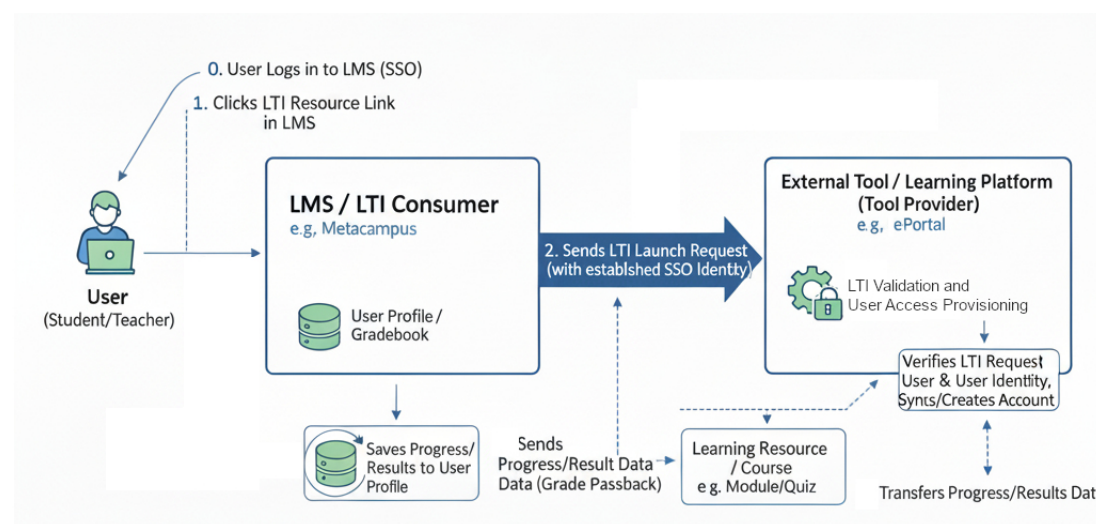


Figure 3: Diagram illustrating LTI flow with Metacampus as the consumer and ePortal as the LTI tool provider. This showcases how a user, already logged into Metacampus via SSO, seamlessly accesses and interacts with a learning resource hosted on ePortal, with automatic synchronization of results back to Metacampus.

The sequence of interactions between the user, the consumer, and the provider can be described as follows:

Step	Action description	Actors
Phase A: Resource Launch and Authorization		
0.	Pre-Authentication (SSO) The User logs into the Metacampus platform, utilizing a central authentication system, such as eduGAIN, which establishes their identity.	User, Metacampus (LTI Consumer)
1.	LTI Link Launch The User clicks on the LTI resource (a link to the ePortal course) within the Metacampus interface.	User, Metacampus (LTI Consumer)
2.	LTI Launch Request Sent: Metacampus (LTI Consumer) generates and sends an encrypted LTI Launch Request to ePortal (Tool Provider). The request contains the established user SSO identity and the LTI credentials.	Metacampus (LTI Consumer)
3.	LTI Validation and User Access Provisioning: ePortal verifies the LTI request, identifies the user, and either synchronizes with an existing account or creates a new one.	ePortal (LTI Tool Provider)
Phase B: Resource Interaction and Data Return		
4.	Resource Launch: ePortal, after verification and authorization, displays the relevant course material (Learning Resource) to the User.	ePortal (LTI Tool Provider), User
5.	Progress/Result Data Transfer: During or after the interaction, result data (e.g., quiz progress, results, grades) is saved internally within ePortal.	Learning Resource, ePortal (LTI Tool Provider)
6.	Grade Passback: ePortal sends the progress and result data back (Result Data) to Metacampus (LTI Consumer).	ePortal (LTI Tool Provider)
7.	Result Saving: Metacampus (LTI Consumer) receives the data and automatically saves it to the User's profile and Gradebook.	Metacampus (LTI Consumer)
8.	Displaying Updated Results: The User sees their updated progress directly within Metacampus.	User, Metacampus (LTI Consumer)

Figure 4: Table illustrating sequences of interactions between user, LTI consumer and LTI tool provider

LTI Connection setup: Metacampus (as Consumer) and ePortal (as Tool Provider)

Preparing the platforms for mutual communication requires prior registration of the systems with one another. Tool Registration between the Tool Provider (ePortal) and the LMS Consumer (Metacampus) is essentially a security contract between these two systems. This process establishes trust, enabling the secure exchange of user identity and learning results. This procedure outlines the steps for administrators to establish the secure LTI connection.

- Phase 1. Tool Provider Setup (ePortal Admin)
 - Register consumer platform: ePortal Admin registers Metacampus as an LMS/LTI Consumer.
 - Generate credentials: ePortal generates required LTI security credentials (Key/Secret, Client ID, etc.).
 - Share credentials: ePortal Admin securely transmits connection details (including Launch URL) to the Metacampus Admin.
- Phase 2. LMS/LTI Consumer configuration (Metacampus Admin)
 - Establish external tool: Metacampus Admin registers ePortal as an LTI Tool Provider (External Tool) using the received credentials.
 - Create course and assign role: Metacampus Admin creates an empty course and assigns the Organiser role to the ePortal Admin. This delegation ensures the

technical linking of the two courses and necessary setup is handled by the ePortal Admin, relieving the course instructor from complex technical configuration.

- Phase 3. Resource Linking (ePortal Admin as Course Organiser)
 - Publish resource (ePortal side): ePortal Admin navigates to the course "Video course on accessibility" in ePortal and sets to Publish as LTI, making it available for external connection. During this configuration, user synchronization settings are also defined. Due to the pilot project involving only staff from Wroclaw Tech, we established the rule that a user must already possess an active account on the destination platform (ePortal) to successfully launch the course (see Fig. 5.).
 - Add External Link (Metacampus Side): ePortal Admin, operating within the empty course in Metacampus, places a link that leads to the materials of the "Video course on accessibility" course hosted on ePortal, remembering to enable the "Allow Wroclaw ePortal to add grades in the gradebook" option.

The screenshot displays a configuration interface for an LTI connection. It features several dropdown menus for setting roles and provisioning modes, and a section for remote system settings.

Role for teacher ?	Teacher
Role for student ?	Student
Teacher first launch provisioning mode ?	Existing and new accounts (prompt)
Student first launch provisioning mode ?	Existing accounts only (prompt)
Remote system	
Grade synchronisation ?	Yes
Require course or activity completion prior to grade synchronisation	No
User synchronisation ?	Yes

Figure 5: The user from the LMS/LTI consumer (Metacampus) must already have an account on the Tool Provider (ePortal). The two accounts are then linked during the first LTI connection.

LTI Resource Launch: User Experience

The process of accessing the course is nearly instantaneous and has a "click and go" character, which eliminates the frustration associated with the need for re-logging. Since logging into Metacampus happened earlier via the eduGAIN SSO system, the key factor for the user is that their identity is already known to the system. They don't have to worry about passwords, as this identity will be automatically passed further.

The user simply sees a link labelled "Course Materials: Accessibility at Wroclaw University of Science and Technology." (Fig. 6). Clicking this link is a standard action for them. Technically, this click begins the generation of the encrypted LTI message, but for the user, it is a single, simple action.

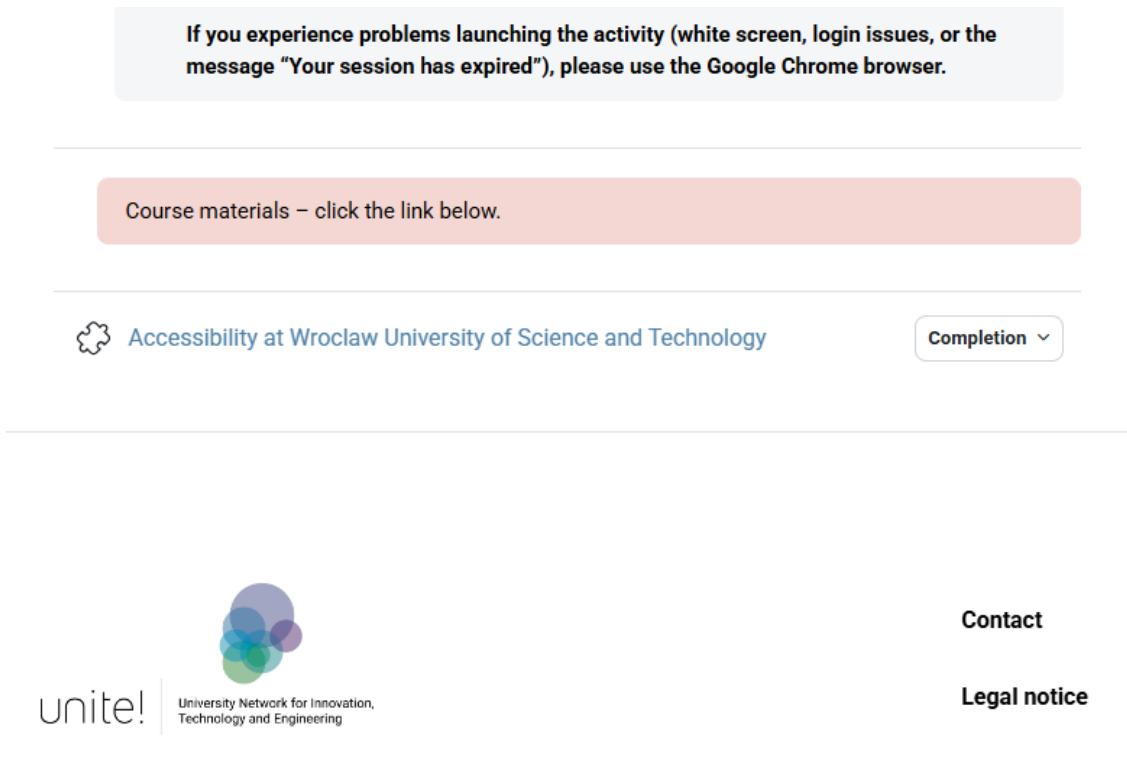


Figure 6: Course launch link

The process in which Metacampus sends authentication data to ePortal and ePortal verifies its correctness and matches the user's account (or determines that the account does not exist, interrupting the early stages of the pilot) takes place in the background. If the integration is working correctly, the transition is fast, lasting only a fraction of a second, showing that the systems are cohesively connected.

Following successful authorization, ePortal displays the appropriate resource to the user (the "Accessibility at Wroclaw University of Science and Technology" course homepage – Fig.7.). The user has full access to all content, quizzes, and activities on the ePortal platform, without the need for further intervention on their part.

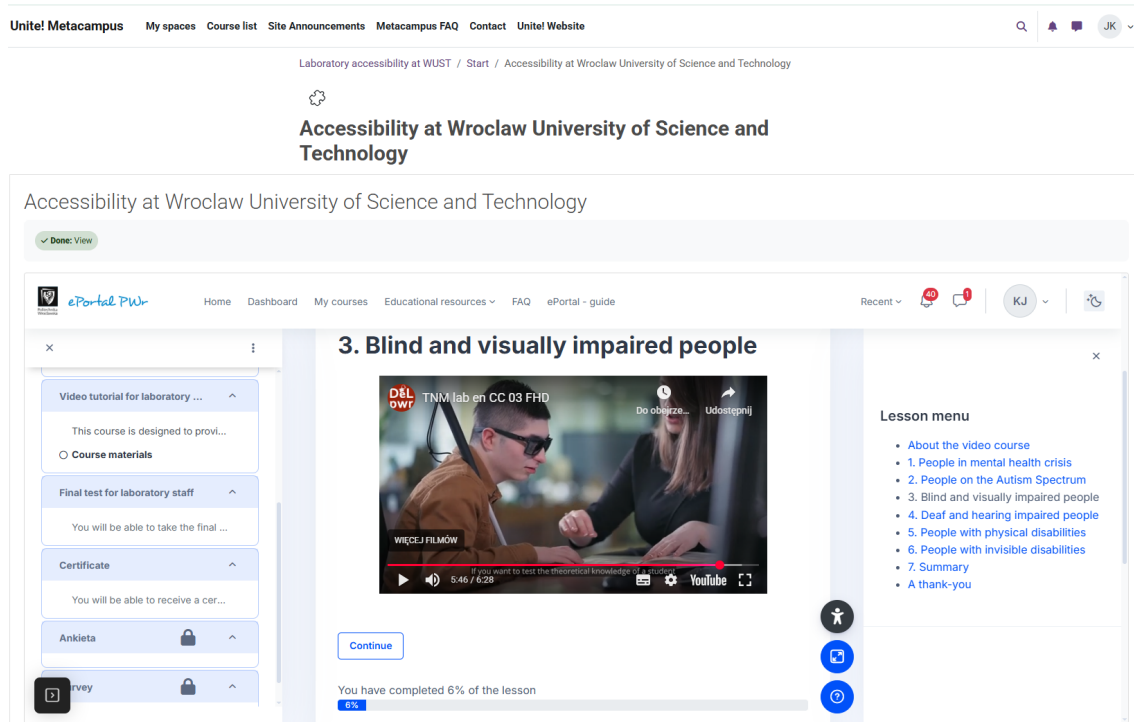


Figure 7: Screenshot of the course view in Metacampus.

The course "Video course accessibility" is visible to the participant as a resource in an embedded window.

For the end-user, this process is synonymous with "seamless access." They perceive Metacampus and ePortal as operating as one unified educational system.

How It Worked

Participation metrics

The pilot was designed with the twin goals of enrolling a minimum of 50 participants (the intended audience were academic teachers) and collecting comprehensive feedback on both the technical aspects of the LTI integration and the quality of the course content. Promotional efforts utilized the university newsletter and announcements within ePortal. It is worth noting that the course timeline, spanning the summer break and the start of the academic year, likely contributed to reduced bandwidth for academic teachers to achieve full completion. Regardless, the key strategic objective —the validation of the LTI integration from the participant's perspective and the collection of actionable course feedback — was successfully accomplished.

Technical performance

The greatest challenge we faced was preparing the integration between the two systems (ePortal and Metacampus) and making the course accessible through it.

It is also worth noting that platform administrators should pay particular attention to the configuration of security settings. In particular, we recommend enabling *Allow frame embedding* in Site Administration → Security → HTTP security, as this option allows LTI tools to be displayed within an embedded frame rather than opening in a separate window, if this mode of access is preferred.

Survey results

Survey methodology

The evaluation survey was created by means of the Questionnaire module and contains 5 questions, including 3 closed-ended questions and 2 open-ended ones. The closed-ended questions required respondents to rate statements on numerical scales of varying ranges and focused on key areas such as understanding the needs of various groups of people at the university, knowledge of available support mechanisms for persons with disabilities, and ability to improve accessibility of university education as well as technical issues such as course navigation and structure. The open-ended questions were optional and offered respondents the opportunity to share their impressions and takeaways from the course.

Key findings

The respondents of the survey unanimously rated the course as comprehensively describing accessibility at Wroclaw Tech. All respondents indicated that after completing the course they now have a better understanding of the needs of various groups of people at the university and are now familiar with the available support mechanisms for persons with disabilities. The majority of the respondents also indicated that the course increased their awareness of how to ensure full accessibility of teaching activities.

All respondents agreed that the course navigation was intuitive and allowed them to easily move through the course elements and that the course structure was clear and facilitated learning. The likelihood of recommending the course reached the highest possible values among the respondents.

In the open-ended questions, participants highlighted the practical dimension of the course materials, references to real student experiences, and the usefulness of the knowledge gained for their everyday teaching and administrative work.

The survey results clearly show that the course effectively supports the development of an accessibility-focused education standards and environment at Wroclaw Tech and can serve as a strong implementation model within the Unite! alliance.

Participant feedback

One comment especially caught our attention as it perfectly summarises the “Video course on accessibility” by Wroclaw Tech:

“Thanks to the completed course, I will now be able to better understand people with special needs, including people with various types of disabilities, and also know what forms of support I can offer them to create a friendly and accessible academic environment so they can study at the university without additional and unnecessary stress.”

Other interesting comments were as follows:

“What I gained from this course was sensitivity to the needs of people with disabilities. The belief that as a teacher I have the support of the Accessibility Department.”

“During this course, I learned that disability is primarily a situation, not a state we find ourselves in. The way society and our surroundings are designed means that people with certain physical or sensory disabilities encounter barriers.”

"This course relied heavily on tips and advice from students with special needs. Often, instructors can overlook multiple disabilities. Reminding everyone about these aspects is important, both for staff and students."

"I learned many interesting definitions from this course"

"It reminded me of my knowledge about disabilities and made me pay attention to those types of disabilities that are not visible to the naked eye."

"This is the latest disability training course for students I've attended. I believe the training is necessary; each subsequent training reinforces the knowledge gained previously and also allows for the expansion of information about student support options. Every semester, during the first session, I share information you send me about where students can apply."

"So far, the topics have been well-analyzed. I think we could consider something else—for example, training for all students to improve their openness, both towards their peers and towards their instructors (who may also have disabilities)."

"The training is developing year by year, but as you can see, the content needs to be expanded to include newly emerging issues."

Lessons Learned and Recommendations

Lessons Learned

From the case described, several relevant lessons can be highlighted across different dimensions:

1. Organisational
 - Technical Delegation – The organizational decision to delegate the LTI linking and configuration (Phase 3) to the ePortal Admin (acting as a Manager in Metacampus) was highly effective. This successfully shielded the course instructor from complex, technical LTI configuration, allowing them to focus purely on didactic content delivery.
2. Didactical
 - Course structure – Most participants completed the video lessons and the questions attached to each video but did not take the final test required to generate the certificate. We assume this is because the final test became visible only after all lessons were completed, and some users may not have realized they were expected to take it, even though this information was included in the instructions. Next time, it would be better to make the final test visible from the beginning.
 - Promotion – One unexpected observation was the greater interest in the course shown by lecturers of theoretical subjects, while we anticipated a higher engagement rate among laboratory instructors, who have direct contact with students. The low exposure of the training – which was only promoted twice in the newsletter and on ePortal, but not on the university's main website – suggests the necessity of strategically adjusting promotional activities and involving a wider range of university units to increase outreach.

3. Technical problems

- **Usability and Accessibility (Small Screens)** – It was noted that using the Metacampus platform on stationary devices equipped with smaller screens can lead to issues with embedded content. The course material loaded via LTI into the embedded frame (iframe) becomes invisible or severely restricted, and the necessity of scrolling within the small window is impractical and significantly reduces user comfort. (Fig. 8) It is essential to test the LTI integration across various screen resolutions and device types to guarantee that embedded content remains fully visible and scrolling is convenient for all users.

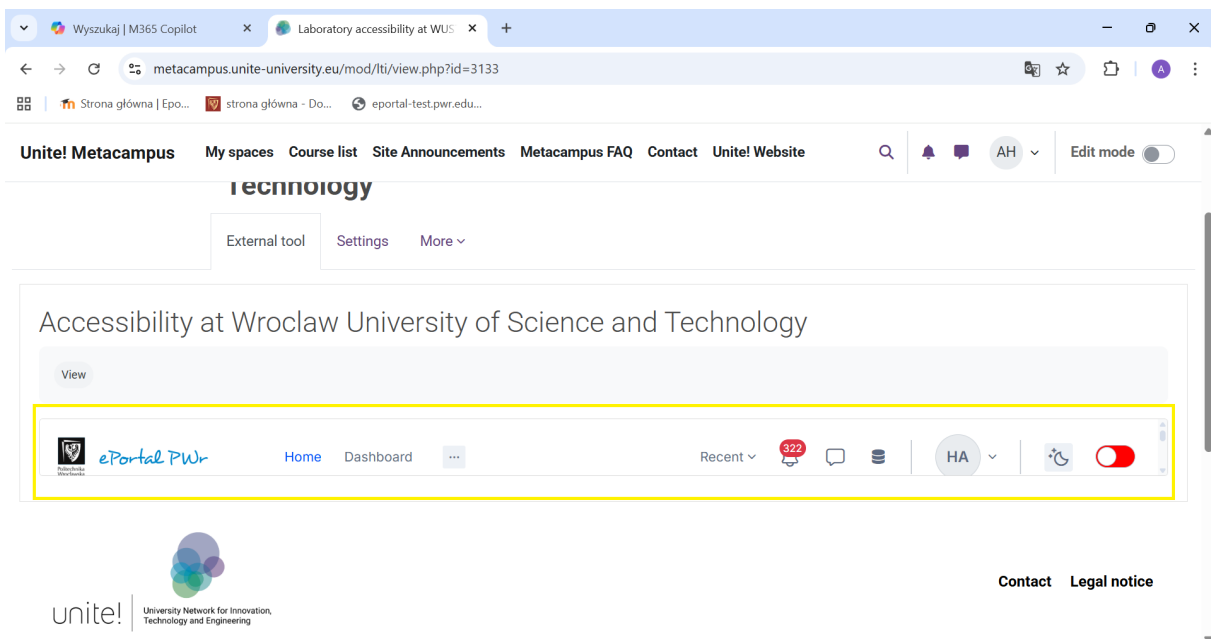


Figure 8: Example illustrating the reduced visibility of embedded LTI content when accessed on smaller desktop viewports, highlighting the need to optimize the platform's response to embedded window sizing

Recommendation for all who want to do s.th. similar

Didactical issues

- Strategic planning of future training should focus on periods of maximum participant availability. This approach is crucial for achieving higher participation, which consequently translates into greater reliability and representativeness of the feedback collected.
- It is also recommended to hold an online organizational meeting to introduce participants to the course structure and rules, and to answer any potential questions.

Technical Recommendations for the Digital Campus

Platform's support for interactive video-based learning modules

One recommendation for the further development of the Unite! Digital Campus infrastructure would be to enhance the platform's support for interactive video-based learning modules. This includes improved tools for embedding video content with integrated knowledge checks, better tracking of learner progress within multimedia materials, and more flexible options for structuring multi-part courses. Strengthening these features would greatly support courses similar to the one described and improve the overall learning experience.

Enhanced LTI Configuration Guidance

It would be beneficial to consider enriching the Metacampus platform with detailed instructional materials (including requirements and videos) concerning LTI configuration. Such resources would serve as a reliable source of knowledge for external platform administrators looking to integrate with Metacampus, significantly streamlining their integration process.

Interested in this?

If you have any questions about the series "Unite Digital Teaching and Learning – Success Story Report", please contact sandra.schoen@tugraz.at

For questions about the Unite! Metacampus, please fill in the Digital Campus form (<https://agora.unite-university.eu/digital-campus-enquiries>) or contact the Metacampus team: metacampus@unite-university.eu

If you want to learn more about the Metacampus or other success stories, take a look at the course "How to use the Metacampus", which is available to all Unite! members at the Metacampus: <https://metacampus.unite-university.eu/course/info.php?id=90>

Appendix: List of Abbreviations

Aalto – Aalto University (Aalto)

Cm – Community (organizational unit in Unite!, directly connected to “work packages”), e.g. Cm2 stands for “Community 2 Digital Campus” (or “work package 2”).

Grenoble INP-UGA – Grenoble INP graduate school of engineering and management, University Grenoble Alpes

IT – Information Technology

KTH – KTH Royal Institute of Technology

LMS – Learning Management System

LTI – Learning Tools Interoperability

API – Application Programming Interface

MMS – Mobility Management System

MOOC – Massive Open Online Course

SSO – Single Sign On

TU Graz – Graz University of Technology

PoliTO – Politecnico di Torino

ULisboa – Universidade de Lisboa

UPC – Universitat Politècnica de Catalunya/BarcelonaTech

TUDa – Technical University of Darmstadt

Wroclaw Tech – Wroclaw University of Science and Technology