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ERASMUS+ CBHE PROJECT # 101177299-ECAMPUS-EDU-2024-CBHE  
**“FOSTERING SOCIALLY DISTANCED AND INCLUSIVE ON  
CAMPUS EDUCATION IN ARMENIAN HEIS”**

**KUNGLIGA TEKNISKA HOEGSKOLAN (KTH)**

**BEST PRACTICE COLLECTION & POLICY  
PAPER ON TECHNOLOGY ENHANCED (TE)  
TLA**

**COUNTRY CASE – SWEDEN**

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**STOCKHOLM 2026**

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## BEST PRACTICE COLLECTION & POLICY PAPER ON TECHNOLOGY ENHANCED (TE) TLA

This template is used to systematically collect and document best practices and infrastructure benchmarks. The information will directly feed into the eCAMPUS benchmark standards for e-learning multimedia platforms and smart classroom models in EU partner institutions.

### General Information

|                        |                                                    |
|------------------------|----------------------------------------------------|
| EU Partner Institution | KTH Royal Institute of Technology                  |
| Country                | Sweden                                             |
| Contact Person         | Viktor Kordas                                      |
| Email                  | <a href="mailto:victork@kth.se">victork@kth.se</a> |

### Section 1: Purpose & Context

|                                                                                                                                                                                                                                                                                                                                       |                                                                                                                               |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------|
| This template covers:                                                                                                                                                                                                                                                                                                                 | Key output:                                                                                                                   |
| <ul style="list-style-type: none"><li>• E-learning multimedia platforms in use</li><li>• Instructional technologies and tools</li><li>• Digital infrastructure and connectivity</li><li>• Technology-Enhanced (TE) classroom models</li><li>• TE ecosystems and governance</li><li>• Policies, standards and sustainability</li></ul> | Benchmark standards for e-learning multimedia platforms and smart classroom models for Armenian HEIs - WP4 public deliverable |

### Section 2: EU Partner HEI Profile

|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| What is the institution's overall approach to digital transformation and e-learning?                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
| <p>Digitalization was introduced as a separate chapter of the KTH Development Plan in 2018 and in the Development Plan 2018–2023, digitization plays a central role. Digitization is one of the President's priority areas and is led by the Vice President for Digitization, Jan Gulliksen.</p> <p>Current Digitalization Strategy covers the period 2023-2027, the Strategy (in English) is provided as a separate file.</p> <p>The strategy includes 4 strategic goals:</p> <ul style="list-style-type: none"><li>• Strengthened digital competence among staff and students</li><li>• The right digital conditions for management, planning and monitoring of operations</li></ul> |

- Simplified and efficient administration through user oriented operational support

Infrastructure which ensures that data is made available internally and externally, in the right way and at the right time.

| Year digital strategy was adopted      | Responsible unit/office for digital education                                                                       |
|----------------------------------------|---------------------------------------------------------------------------------------------------------------------|
| December 2022, Ref. number V-2022-0710 | Vice President for Digitization, IT Department within University Administration and the IT Portfolio Steering Group |

## Section 3: E-Learning Multimedia Platforms

### 3.1 Learning Management System (LMS)

| What LMS does the institution use?                                                                                   |
|----------------------------------------------------------------------------------------------------------------------|
| Canvas LMS, commercial system, provided by Instructure, <a href="http://www.instructure.com">www.instructure.com</a> |

| How long has the LMS been in use?                                                    | What percentage of courses actively use the LMS?            |
|--------------------------------------------------------------------------------------|-------------------------------------------------------------|
| Current LMS - Canvas is used since 2013, before that another LMS was used since 2005 | 100%, Canvas is the only instrument for delivering courses. |

| Which LMS features are most actively used by staff and students?                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <p>Canvas is the only system for providing courses and it offers a wide range of tools for teachers and students, including:</p> <p>content delivery, video lectures, quizzes, forums, assignment submission, exams (creating and implementing), plagiarism detection, analytics.</p> <p>Canvas is integrated with the national system for academic records – Ladok enabling direct export/import of the academic records</p> <p>Extensive support for teachers is provided by IT-Support and E-learning support.</p> <p>KTH intranet provides supporting information and training for teachers:</p> <p><a href="https://intra.kth.se/en/utbildning/systemstod/canvas">https://intra.kth.se/en/utbildning/systemstod/canvas</a></p> |

| How is the LMS integrated with other institutional systems?                                                                                                              |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Canvas is integrated with institutional systems with import/export of the student names, SSO, video platform (Kaltura) and national system for academic records – Ladok. |

### 3.2 Multimedia and Video Tools

|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| What tools are used to create, host, and deliver multimedia content (video, audio, interactive media)?                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
| <p>KTH promotes extensive use of video in teaching, and elaborated support is provided to the teachers by the support team. More information can be found: <a href="https://intra.kth.se/en/it/video/oversikt-1.1078519">https://intra.kth.se/en/it/video/oversikt-1.1078519</a></p> <p>The main tools used are:<br/>Kaltura (KTH Play) and YouTube.<br/>Recording and editing tools used:<br/>Kaltura Capture (free to use for employees) and Camtasia (license fee).<br/>Teachers also use Kaltura Express Capture, PowerPoint and Zoom.<br/>Adobe Creative Cloud applications are used by advanced users</p> |

|                                                                |                                               |
|----------------------------------------------------------------|-----------------------------------------------|
| Are lecture capture or screen recording tools in use?          | Are interactive video or H5P-type tools used? |
| Not much, though the infrastructure and support are available. | No                                            |

|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| What is the policy on multimedia content ownership, storage, and accessibility?                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
| <p>Accessibility of digital content shall be in line with the EU directive "The Act on Accessibility to Digital Public Services (DOS)". In Sweden, the directive is implemented by the law on accessibility to digital public services that came into force on 1 January 2019. KTH as an authority therefore needs to adapt its website so that content is published in an accessible format for everyone. According to Swedish legislation intellectual property is owned by the persons who produced it – all lectures are owned by respective teachers. The video materials are captured and/or subtitled in line with the accessibility legislation. Digital materials are stored without real limitation.</p> |

### 3.3 Collaboration and Communication Tools

|                                                                                                                                                                                                                                                                                                                             |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| What digital tools are used for online assessment, quizzes, and automated feedback?                                                                                                                                                                                                                                         |
| <p>All functionality is built into the LMS:</p> <ul style="list-style-type: none"><li>- All exams are fully integrated, including written exams (by means of app for scanning of the exams)</li><li>- Möbius</li><li>- Mentimeter</li><li>- Inspira Originality (plagiarism control)</li><li>- Canvas Teacher app</li></ul> |

- KTH Digicertus Exam (functionality to lock the computers during exams to avoid unauthorized use during the exam)

#### Collegial Collaboration with Kuppi

Kuppi is a digital space for collegial learning and professional collaboration at KTH. Kuppi enables communication between colleagues with shared interests and offers opportunities to exchange ideas and insights with each other. Hosted on Microsoft Teams, Kuppi allows discussions to continue beyond activities such as workshops and courses, fostering a dynamic learning community.

#### How does the institution ensure academic integrity in digital assessments?

KTH teachers must follow guidelines for development of syllabuses, examinations, student influence and providing quality of the offered courses.  
The guidelines are provided as attachments to this questionnaire

## Section 4: Instructional Technologies and Infrastructure

### 4.1 Hardware and Physical Infrastructure

#### What hardware infrastructure supports digital teaching across the institution?

There is annual budget for purchase of personal IT equipment. The suppliers are publicly procured and ordering is carried out through online ordering portal integrated into KTH domain.

When it comes to personal devices(laptops) there are recommended configurations for PC and Apple computers. For such devices a specially developed configuration of OS is being installed with guaranteed service and support. Other devices can be purchased with limited service and support.

There are different types of classes:

- Standard: equipped with screens, projectors and connections
- Video-conferencing rooms: equipped with equipment to support videoconferencing during the classes, require special reservation (in case of joint courses, distributed group work, etc)
- Subject-specific labs: need to be reserved in advance for specific courses
- Computer rooms for students – equipped with the all-round PCs. Students can download necessary software using their credentials. Access to the software applications is regulated by the student credentials and course registration.

All campus territory is covered with high-speed Internet access via Wi-Fi, seamless access to the network on all campuses using the student credentials.

Dedicated Wi-Fi network for BYOD – KTH Open and EDUROAM

Is there a device loan programme for students?

Is there a BYOD (Bring Your Own Device) policy?

|    |    |
|----|----|
| No | No |
|----|----|

#### Describe the institution's network and connectivity infrastructure.

All campus territory is covered with high-speed Internet access via Wi-Fi, seamless access to the network on all campuses using the student credentials.  
Backbone network is fiber-based and integrated into SUNET and NORDUNET.  
Dedicated Wi-Fi network for BYOD – KTH Open and EDUROAM

## 4.2 Software and Licensing

#### What software licences does the institution provide to staff and students for digital teaching?

KTH provides software for employees and students through procurement, purchase and distribution of software. The aim is a wide selection of software, low costs for KTH and the user, simple installation and high conformity to license agreements.  
KTH provides software from various suppliers to cover needs of students and researchers. More details can be found <https://intra.kth.se/en/it/programvara-o-system/programvara/installera/download/kth-software-download-1.571781>

##### Access to software

- In order to download the software from KTH a person have to login with kth.se account and password. All downloads are logged for license and statistical purposes.
- Some software is provided through the portals of the software manufacturers and may require registration and creation of additional accounts.
- By logging in and downloading software from KTH or a manufacturer portal a person agrees to the rules above.

##### Who is eligible

- Only those affiliated to KTH are eligible for the software offered by KTH.
- To be affiliated to KTH a person must have a status as student, faculty or staff of KTH.

##### Who qualifies for the student license

In Sweden studies at university level are divided into three cycles/levels:

- Bachelor level (first cycle) - the first three years
- Master level (second cycle) - one or two years following the first cycle
- Doctoral/PhD (third cycle)- four years following the second cycle

The software is free **strictly for the first/second cycle students enrolled at KTH, or anyone studying a first/second level course offered by KTH.**

## 4.3 Accessibility and Inclusive Technology

#### What accessibility technologies and provisions are in place?

Students with documented, permanent disabilities, like dyslexia, ADHD, other mental health conditions or physical disabilities, can receive compensatory support in their studies at KTH. The group that coordinates supports is called Funka.

The most common support is support during the examination. It may be about extended writing time or that you can write on a computer instead of by hand. However, there is also note-taking support and access to a mentor or resource room.

Digital note-taking support - Echo SmartPen

Note-taking support works by recording a lecture using Microsoft Teams Premium software, which then transcribes and summarizes what has been said.

KTH offers mentor support to students with certain disabilities. The support means that a student can get help to structure and plan his or her studies.

If a student has a disability that makes it difficult to read printed text, the library can help to access course literature as talking books, e-text or braille. Talking books can be read on a computer, mobile phone or tablet.

TorTalk: Everyone at KTH can download the speech synthesis TorTalk on their computer. TorTalk is a programme that can convert all digital texts to speech.

Spelling aids

Students and employees at KTH also have free access to a number of spelling aids, among those Spellright for English texts and Stava Rex for Swedish texts.

If a student has a certificate from the coordinator for disabled students (Funka), he or she can book the resource room at the KTH Library. The resource room at KTH Library is only available for those with dyslexia. Funka adds the access rights to your KTH access card. These rooms are available when the premises are open and they can be booked in advance.

Course on digital accessibility is provided for all staff members.

|                                                                   |                                                                                |
|-------------------------------------------------------------------|--------------------------------------------------------------------------------|
| Are digital accessibility standards formally applied (e.g. WCAG)? | Is there dedicated support for students with disabilities in digital learning? |
| No                                                                | Yes.                                                                           |

#### 4.4 IT Support and Training for Staff

|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| What IT support and training is available to teaching staff for instructional technology?                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| <p>KTH provides extensive IT – support and training for staff, including:</p> <ul style="list-style-type: none"> <li>- Use of LMS Canvas and applications</li> <li>- Webinars on use of hybrid teaching, live streaming and combined classroom instruction with Zoom, creating videos and integrating in courses</li> <li>- Course in digital accessibility (3 hours)</li> <li>- FAQ Accessibility</li> <li>- Course for teachers “<b>Digital Learning in Higher Education 4.5 credits</b>”</li> <li>- Course for teachers “<b>Generative AI for teaching and learning in higher education 3,0 ECTS</b>”</li> </ul> |

|                                                          |                                                          |
|----------------------------------------------------------|----------------------------------------------------------|
| Is there a dedicated Learning Technology team or centre? | Is staff training in instructional technology mandatory? |
| No                                                       | Yes                                                      |

## 4.5 Pedagogical Approach

| Methods used                                                                                                                                                                                                                                                                                                                                                      | How technology enhances learning                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <p>KTH applies CDIO concept for all its educational offerings (<a href="http://www.cdio.org">www.cdio.org</a>)</p> <p>KTH also applies <b>Challenge Driven Education in a Global Context</b>.</p> <p><b>The training for teachers is provided on integration of these approaches in their courses as a part of 15 ECTS pedagogical development trainings.</b></p> | <p>Changes to the digital learning environment are carried out as projects involving coworkers from the division as either project managers or participating from an educational perspective. Coworkers from the IT department participates in the investigative work and leads the system development.</p> <p>Ongoing projects at the moment concern, for example, Canvas' new features, Generative AI in education, the group web/Social and KTH's system for course evaluation and course analysis.</p> |

## Section 5: Technology-Enhanced (TE) Ecosystems and Smart Classrooms

### 5.1 Smart Classroom Models

| Describe the main smart classroom model(s) used at this institution.                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <p>There are 2 main models: lecture room and classroom:</p> <p>Lecture room hybrid-enabled, Example 1:</p> <ul style="list-style-type: none"> <li>• Blackboard</li> <li>• Blackout curtains</li> <li>• Camera</li> <li>• Document camera</li> <li>• HDMI input</li> <li>• Hearing loop (T-coil)</li> <li>• Loudspeakers</li> <li>• Power outlets in the auditorium</li> <li>• Preview display, 2</li> <li>• Projector, 3</li> <li>• Touch Panel</li> <li>• Water</li> <li>• Wireless handsfree microphone, 2</li> </ul> |

- Wireless image transmission, 1
- Wireless microphone, 2
- XLR output

Lecture room hybrid-enabled, Example2:

- Blackout curtains
- Camera
- Display, 4
- Document camera
- HDMI input, 1
- Hearing loop (T-coil)
- Loudspeakers
- Projector, 4
- Touch Panel
- VGA input, 1
- Whiteboard, 4
- Wireless handsfree microphone, 2
- Wireless microphone, 2
- XLR output, 1

Classroom, active learning:

- Blackout curtains
- Button Panel
- Display, 6
- HDMI input
- Loudspeakers
- Projector, 1
- Water
- Whiteboard, 4
- Wireless image transmission, 7

Classroom, standard:

- Blackboard
- Blackout curtains
- Document camera, 1
- HDMI input, 1
- Loudspeakers
- Projector, 1
- Water
- Wireless image transmission

Classroom, hybrid-enabled:

- Blackboard, 2
- Blackout curtains
- Camera
- Document camera
- HDMI input
- Loudspeakers
- Microphone
- Preview display
- Projector, 2

- Touch Panel
- USB-C
- Water

Wireless image transmission

How many smart classrooms exist across the institution?

What percentage of all teaching rooms are smart?

Lecture rooms: 28, classrooms: 42

Most

Are there different tiers or types of smart classroom (e.g. basic, standard, advanced)?

Standard, active learning (possible to rearrange furniture) hybrid-enabled

## 5.2 Hybrid and Blended Teaching Spaces

Are there classrooms specifically designed for hybrid teaching (simultaneous in-person and online students)?

There are hybrid-enabled lecture rooms (large lecture halls, 70+ seats) and hybrid-enabled classrooms (smaller rooms, up to about 40 seats)

Classroom, hybrid-enabled:

- Blackboard, 2
- Blackout curtains
- Camera
- Document camera
- HDMI input
- Loudspeakers
- Microphone
- Preview display
- Projector, 2
- Touch Panel
- USB-C
- Water
- Wireless image transmission

Lecture room hybrid-enabled, Example2 (newer rooms):

- Blackout curtains
- Camera
- Display, 4
- Document camera
- HDMI input, 1
- Hearing loop (T-coil)
- Loudspeakers
- Projector, 4
- Touch Panel

|                                                                                                                                                                                       |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <ul style="list-style-type: none"> <li>• VGA input, 1</li> <li>• Whiteboard, 4</li> <li>• Wireless handsfree microphone, 2</li> <li>• Wireless microphone, 2</li> </ul> XLR output, 1 |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|

|                                             |                                                                                         |
|---------------------------------------------|-----------------------------------------------------------------------------------------|
| Are hybrid classrooms a strategic priority? | What is the main driver for hybrid classroom investment?                                |
| Yes.                                        | Internationalisation, joint programs and courses, EU European Universities development. |

### 5.3 Specialist TE Learning Spaces

|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Are there specialist technology-enhanced spaces beyond standard classrooms?                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
| <p>Videoconferencing-enabled rooms: used for open lectures, thesis presentations, during events</p> <p>Equipment:</p> <ul style="list-style-type: none"> <li>• Blackboard, 2</li> <li>• Blackout curtains</li> <li>• Camera, 3</li> <li>• Document camera</li> <li>• HDMI input, 3</li> <li>• Hearing loop (T-coil)</li> <li>• Loudspeakers</li> <li>• Preview display, 2</li> <li>• Projector, 3</li> <li>• Stationary microphone</li> <li>• Touch Panel</li> <li>• USB-A, 1</li> <li>• USB-C, 2</li> <li>• Video conferencing system</li> <li>• Water</li> <li>• Wireless handsfree microphone, 2</li> <li>• Wireless microphone, 2</li> <li>• XLR output</li> </ul> <p>Media-development rooms (for producing MOOCs and video-enabled lectures):</p> <p>Mini-studio (usually installed at department level):</p> <ul style="list-style-type: none"> <li>• A desktop computer</li> <li>• A speaker camera that can be controlled with a remote control</li> <li>• A directional microphone for good sound recording</li> <li>• Two LED lights on adjustable stands</li> <li>• Speakers for monitoring the sound.</li> </ul> |

Maxi studio (available for all teachers, need to book in advance, including 15-minutes training)

- Lighting.
- A wall mounted, fully automated video camera.
- Teleprompter for playback of rolling speaker.
- Wireless and ordinary microphones.
- A large green screen.
- Studio curtains.
- Resource computer (For accessing OneDrive, managing files, and controlling teleprompter text).
- Zoom control panel and multiple wall-mounted monitors for video meetings.
- Learning glass.

VR/AR rooms - experimental environment, used mainly for research purposes including Master students from the subject area

How are these specialist spaces managed, booked, and made accessible to students and staff?

The facilities can be booked online via KTH internal booking system (TimeEdit)  
Mini studios are booked according to internal departmental arrangements

## 5.4 TE Ecosystem Governance and Standards

How does the institution define, maintain, and update its smart classroom and TE standards?

There are set of regulations and recommendations that guide the use of IT-infrastructure.

Details can be found:

<https://intra.kth.se/en/utbildning/e-larande/stodmaterial/digital-utbildning-1.1073511>

KTH promotes sustainable use of the IT equipment:

<https://intra.kth.se/en/it/arbete-pa-distans/hallbar-anvandning-av-it-utrustning-1.1165065>

What procurement and lifecycle management process is followed for TE infrastructure?

Annual budget for IT infrastructure includes support for existing infrastructure (including software) and new investments. The new investments shall be agreed and approved. The specification of the equipment is decided by E-learning together with the IT-Support team. Selection of the particular models of devices, installation and support is under IT-Support.

Purchase is carried out according to public procurement regulations: suppliers are usually procured for a period of 2-3 years, if specific devices are not available at the procured suppliers, a dedicated procurement can be carried out.

|                                                        |                                                                               |
|--------------------------------------------------------|-------------------------------------------------------------------------------|
| Is there a formal TE classroom specification document? | Is there a sustainability or carbon reduction strategy for TE infrastructure? |
| No                                                     | Yes, link provided above                                                      |

## Section 6: Maturity Assessment and Benchmarking

### 6.1 Overall Benchmarking Summary

|                                                                                                                                                                                                                                                                                                                                     |                                                                                           |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------|
| What is the single most impressive or distinctive practice you observed at this institution?                                                                                                                                                                                                                                        |                                                                                           |
| Consistency of the IT solutions throughout the university: the teachers can benefit from recognizable hardware/software solutions at all classrooms. Booking of all classrooms/lecture rooms is carried out online through the TimeEdit application and it provides clear overview of the IT-infrastructure available in each room. |                                                                                           |
| What is the most distinctive feature you can describe for your institution?                                                                                                                                                                                                                                                         |                                                                                           |
| Significant budget is available for IT-Infrastructure: teachers can update and modernize their IT tools on regular basis.<br>Wide range of software tools is available both for teachers and students for educational purposes. Students have a possibility to use software tools which they encounter in the working environment.  |                                                                                           |
| Is this model potentially transferable to Armenian HEIs?                                                                                                                                                                                                                                                                            | What would be the main barriers to transfer?                                              |
| Not directly                                                                                                                                                                                                                                                                                                                        | Cost, infrastructure (physical on campus and national), skills of the staff, regulations. |

## Section 7: Recommendations for Armenian HEIs

### 7.1 Priority Recommendations

|                                                                                                                                                                                                                                                                                                                                                                                                                                 |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| What are your top 3 recommendations for Armenian HEIs based on this visit?                                                                                                                                                                                                                                                                                                                                                      |
| Making LMS to a single system for delivery of courses introduces important structuring for students but also imposes requirements on teachers – they shall be able to use the system and constantly broaden the spectrum of IT-skills and competences they possess.<br>The adoption process shall be inclusive and involve both academic and administrative staff as well as students with the trainings and capacity building. |

### 7.2 Quick Wins vs Long-Term Investments

|                                       |                                     |
|---------------------------------------|-------------------------------------|
| Quick wins (achievable within 1 year) | Longer-term investments (2-4 years) |
|---------------------------------------|-------------------------------------|

|    |    |
|----|----|
| -- | -- |
|----|----|

## Section 8: Best Practice Examples

### 8.1 Best Practice

Guidance: Describe a key TE-TLA best practice

|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Title: Dissemination of digital teaching practices                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
| Problem addressed                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
| <p>KTH teachers need to be able to assess student progress by means of different tools and exam types. They need to implement the assessment in a consistent way, aligned with the learning outcomes and teaching methods. Each edition of a course shall integrate the set of assessment tools which do not repeat the one from the previous edition(s) and provide the ground for assessment of the student progression towards achievement of the learning outcomes.</p> <p>The assessment tools shall be clearly described to the students in the syllabus and be in line with the KTH rules and regulations</p>                                                                                                                                                                                                                                                                                                                                                                    |
| Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
| <p>All information about the examinations is collected in one place on KTH website providing seamless support for the teachers. Here the teachers can find information on how to plan the assessment, checklists on conducting examinations, and preventing cheating.</p> <p>The guidelines and recommendations are provided to support different types of examinations and the tools available to support them including scanning of the written exams and transferring the grades to Ladok.</p> <p>KTH's training for examiners</p> <p>The Qualification course for examiners allows to acquire or update the knowledge of the current rules and guidelines governing examinations and the role of the examiner in order to be able to act correctly as an examiner. During the course, a teacher will learn more about legal certainty, outcome-based, assessment of equal value, and become familiar with KTH's local regulations regarding course syllabuses and examinations.</p> |
| Technologies used                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
| The Qualification course is available to all teachers through the KTH LMS Canvas.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |

### 8.2 Impact & Recommendations

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|-------------|
| Key Results |
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All teachers have necessary skills and competence to design their courses with the examination moments aligned with the learning outcomes and teaching methods, plan the exams and integrate them into Canvas.

All administrative support is provided to the teachers according to their needs in examinations: rooms, special needs student support, scanning of the written exams, etc

Smooth collection of the exam results, approval by the examiner, communication with the students and connection to the national system for academic records Ladok are integrated into Canvas

### Student engagement

Students can receive necessary information on the assessment moments in each course, requirements, deadlines and procedures as well as grading criteria. Having clear understanding of the assessment process helps students to plan their studies.

### Top 3 recommendations

Use the potential of LMS to streamline student assessment according to internal regulations of the university. Integration with LMS enables use of various digital tools for assessment and preventing plagiarism.

### Transferability

This approach is easily transferrable.

### Barrier

Institutional deployment of the LMS for all educational offerings