



Storträffen Meetup

Teaching for the Future –
with Today's Resources and
Challenges

KTH SoTL

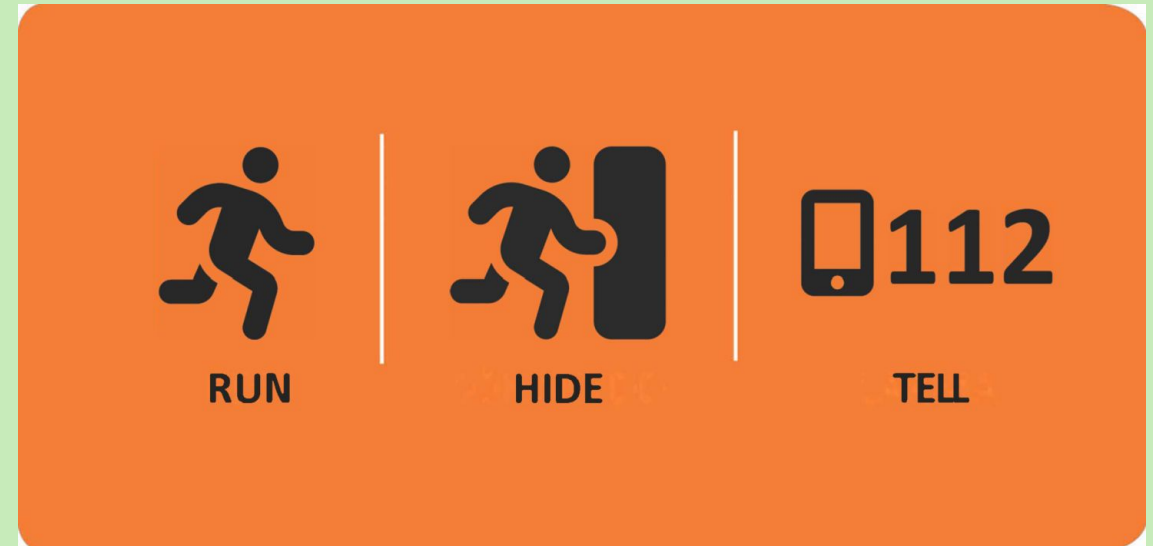
Taking Learning Seriously

Chair: Sofia Ritzén, Dean of Faculty

Organized by the Department of Learning, ITM

Security

- ▶ SOS alarm
 - 112 – emergency number for danger to life, property, and the environment
- ▶ 790 6000 – KTH Security
- ▶ Emergency exits have been checked today
- ▶ Defibrillator: Malvinas väg 10, opposite the entrance



KTH open arenas for education development

- ▶ Storträffen Meetups - broad, networking, idea-generating and inclusive
- ▶ Lunch 'n' Learn - teachers share knowledge and experiences, focusing on pedagogical solutions
- ▶ PriU-groups - specialized, concrete and results-oriented
- ▶ KTH SoTL - in-depth, scientific studies



Storträffen meetups every semester since 2016

- Links teachers, students and operational support
- Current and long-term questions can be raised, discussed, acted upon and anchored in the whole organization.

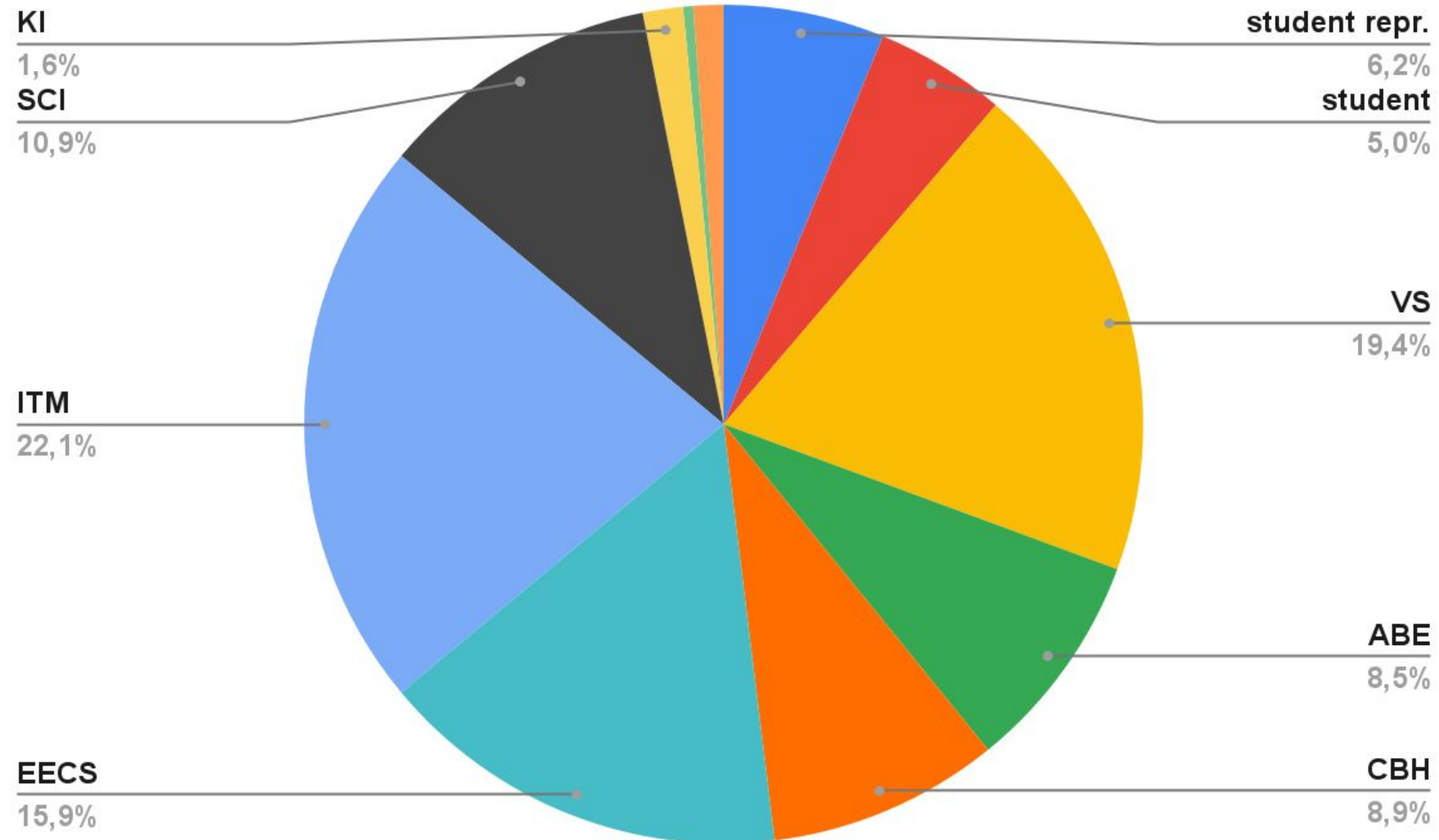
- Part of KTH Guidelines on systematic quality assurance and enhancement of education:

University-wide exchanges of experience and learning are part of systematic quality work at KTH.

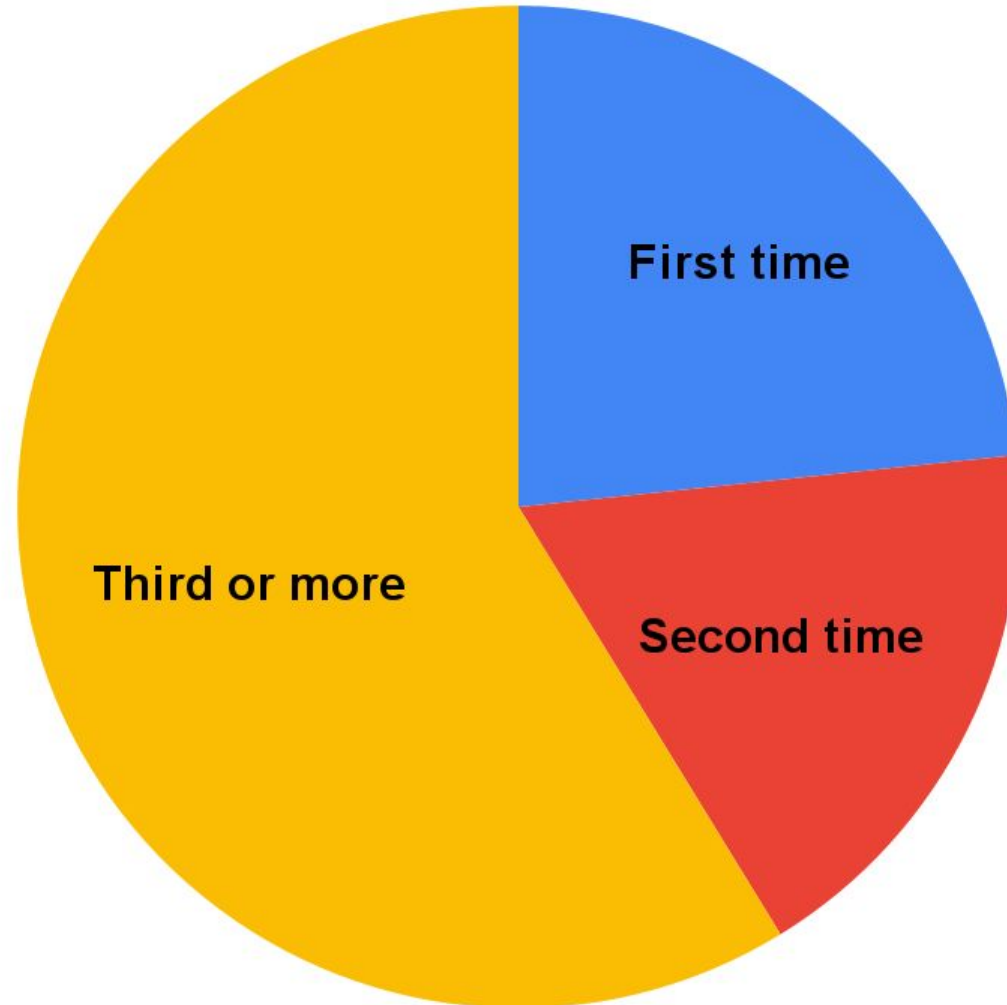
The arenas for this are the so called Storträffen Meetups and the collegial working groups for prioritised education issues (PriU groups).



Where are the Storträffen Meetup participants from?



First-Time or Returning Participants?



Let's help each other make the meetup work

- ▶ All discussion leaders are happy to help you to find your way or understand the schedule
- ▶ Be friendly and inclusive in the discussions!
- ▶ A special welcome to the students and student representatives

The plenary sessions are recorded
The group discussions are not recorded
Photos are taken during the meeting
Future Education pod will be recorded





Anders Söderholm
KTH President





Learning by Teaching: A teacher's transformation

Rodrigo Eduardo Muro Avendano

Lecturer

Division of Architectural Lighting Design



Storträffen / SoTL

Rodrigo Muro

Architect / Lighting Designer

KTH ABE / Architecture / Architectural Lighting Design

| | |
|-----------------------|------|
| Lecturer | 2011 |
| PA | 2020 |
| PhD Researcher | 2023 |
| KTH Pedagogical Prize | 2024 |



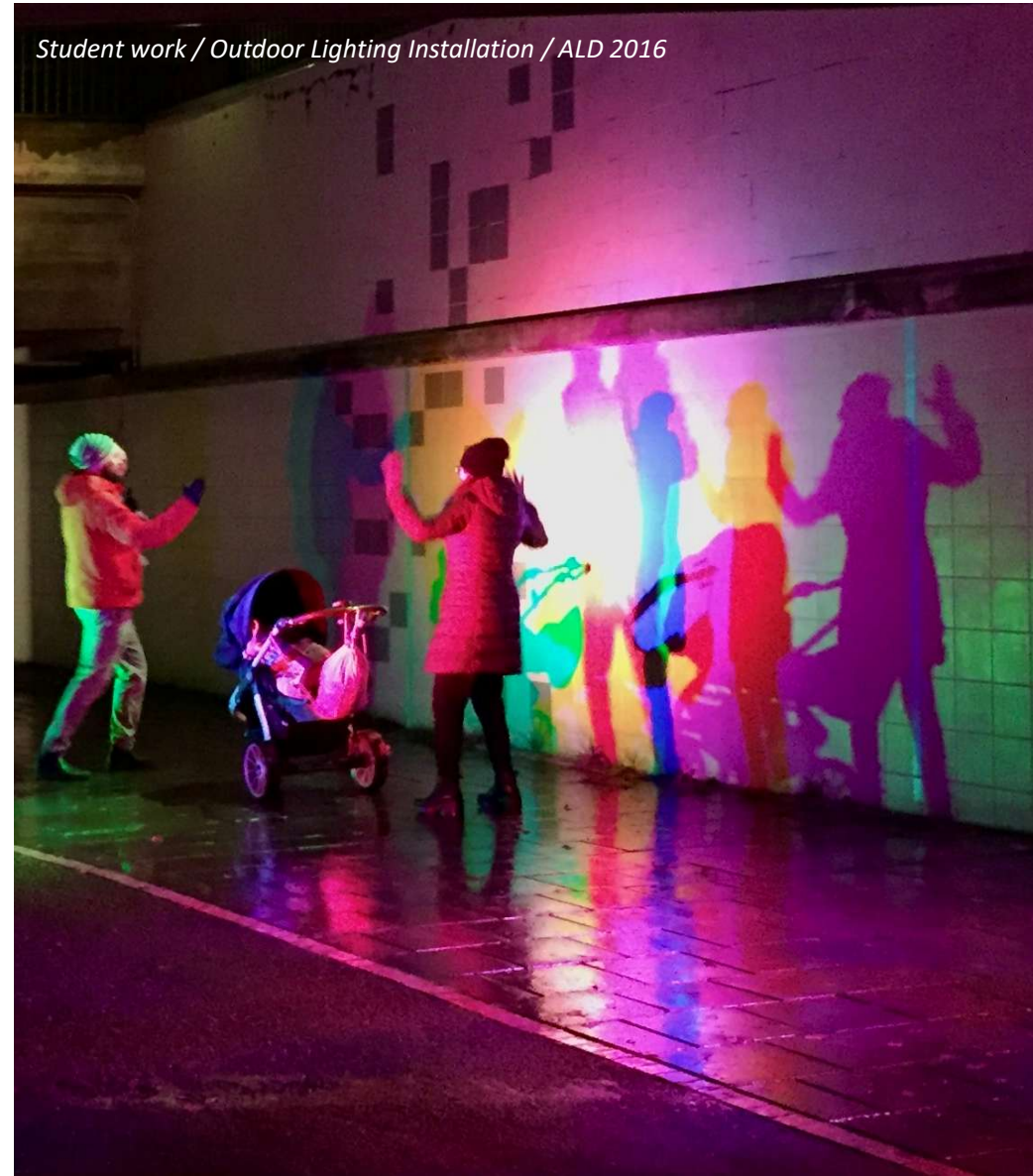
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Topic:

Teaching for the Future - with today's resources and challenges

Taking Learning Seriously

Student work / Outdoor Lighting Installation / ALD 2016





Then and now

Transforming myself through teaching

MT presentation

Lighting Laboratory
KTH STH 2006/07 – 2010
Reflecting on light



Teaching

Architectural Lighting Division
KTH ABE 2011 – 2025
MSc Architectural Lighting Design





Then and now

*“Learning by Teaching:
A teacher’s transformation.”*

MT presentation

Lighting Laboratory
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Teaching

Architectural Lighting Division
KTH ABE 2011 – 2025
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Student work / Luminaire design / ALD 2014



Student work / Luminaire design / ALD 2014

From guidance to freedom

Transforming instruction into independent thinking

Best advice I got from
a teacher:

*“The goal is to have enough understanding to
develop informed criteria.”*

Student work / Luminaire design / ALD 2014

Critical thinking

Assessment / Project & process

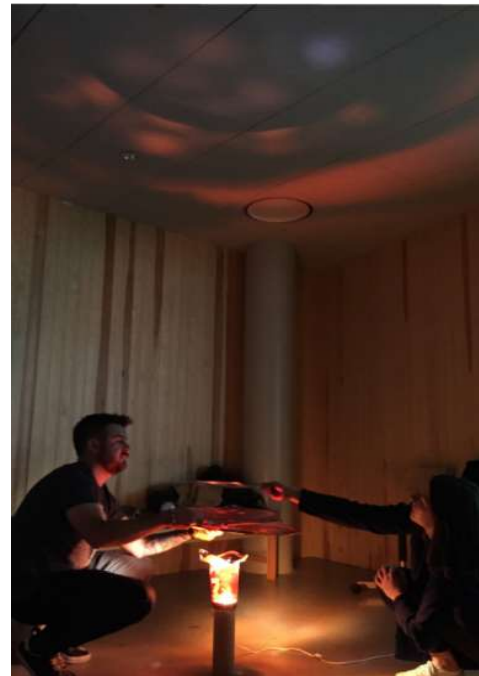
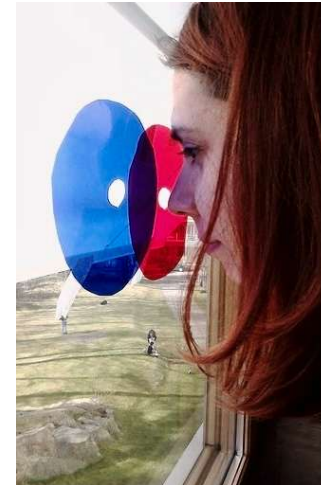
Student work & exercises / ALD / Imgs. ALD students, Kyriakidou & Muro



Experimental & experiential

- Learning through lived experience
- Learning is bi-directional
- Constructive pedagogy, both teacher and students are constructors of knowledge
- Opportunity to study and revise own teaching processes continuously
- Teaching as a vehicle for faculty development
- Reflective practice

LEARNING THROUGH THE ACT OF TEACHING



Beyond Reflection

Move both teaching and learning into a **diffractive method** from projecting ideas unchanged into students, to offer ideas that are diffracted—*bent, reshaped, and made meaningful*—through shared exploration.

| <u>Method</u> | <u>Description</u> | <u>Role of Teacher</u> | <u>Role of Student</u> |
|--------------------|---|---------------------------|--------------------------|
| Transmissive | Knowledge is delivered "as-is" | Expert, delivers content | Absorber, passive |
| Reflective | Focus on introspection and self-awareness | Facilitator of reflection | Reflects on own learning |
| Diffractive | Knowledge is interpreted and reshaped through context | Mediator, interpreter | Active meaning-maker |

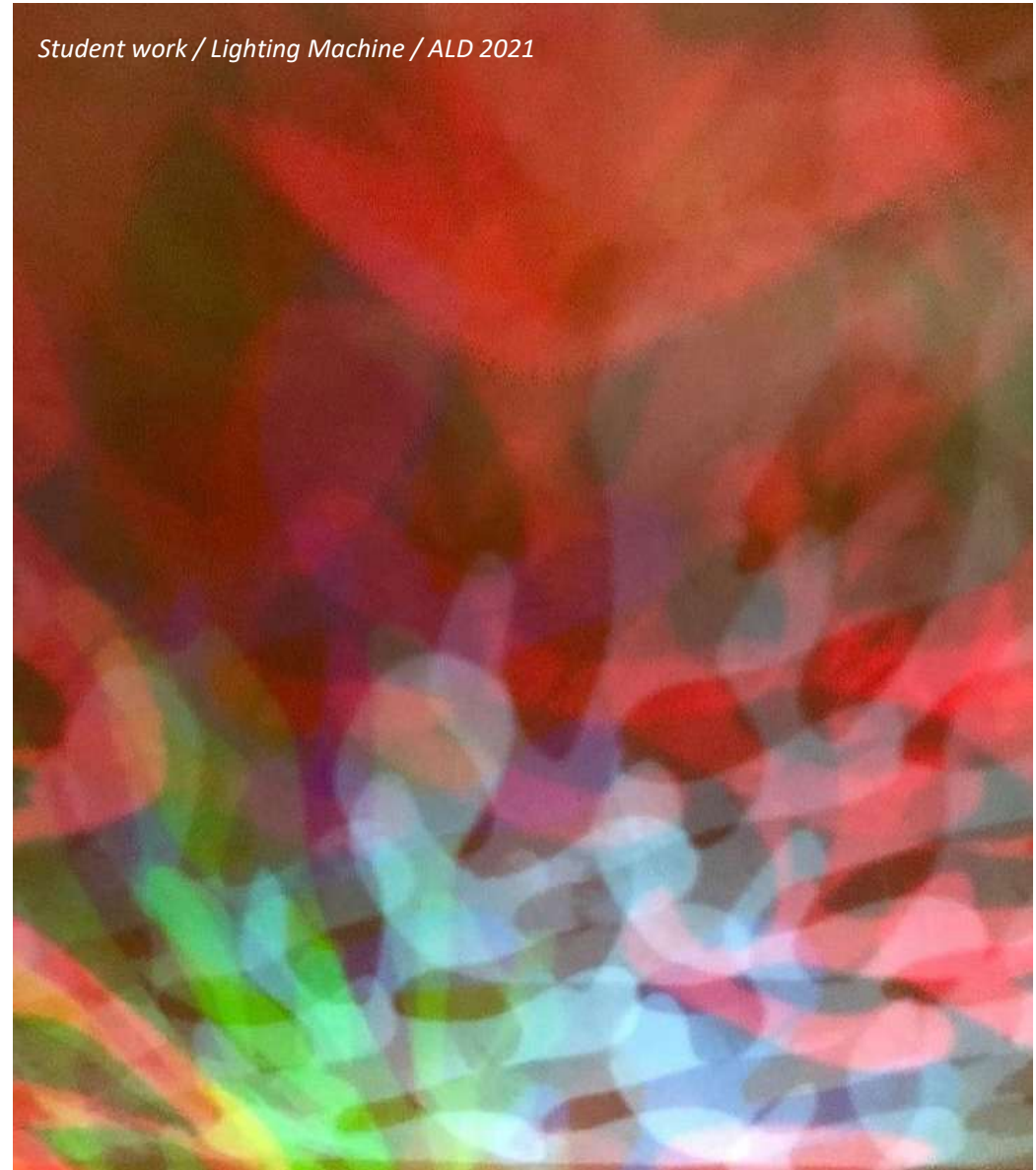




Teaching philosophy

| | |
|----------------|--|
| Intentionality | Orient attention and awareness toward concepts, situations, experiences, or meanings. Engaging with students as meaning-makers. |
| Reciprocity | Mutual meaning-making between teacher and students. Meaning is co-constructed through dialogue, presence, and interaction. |
| Interpretation | Continuous interpretation and re-interpretation of meaning in teaching and learning. This involves interpreting students' experiences and narratives, rather than just measuring learning through fixed outcomes |

Student work / Lighting Machine / ALD 2021



How to support this?

- Multicultural and diverse class
- Open ended questions/solutions
- Project based assessment
- Face to face interactions
- Lively and open campus
- Hands on experience
- Continuous development of courses
- Continuous development for teachers
- Collaboration and integration for teaching
- Informing teaching through research
- Combining teaching with research duties



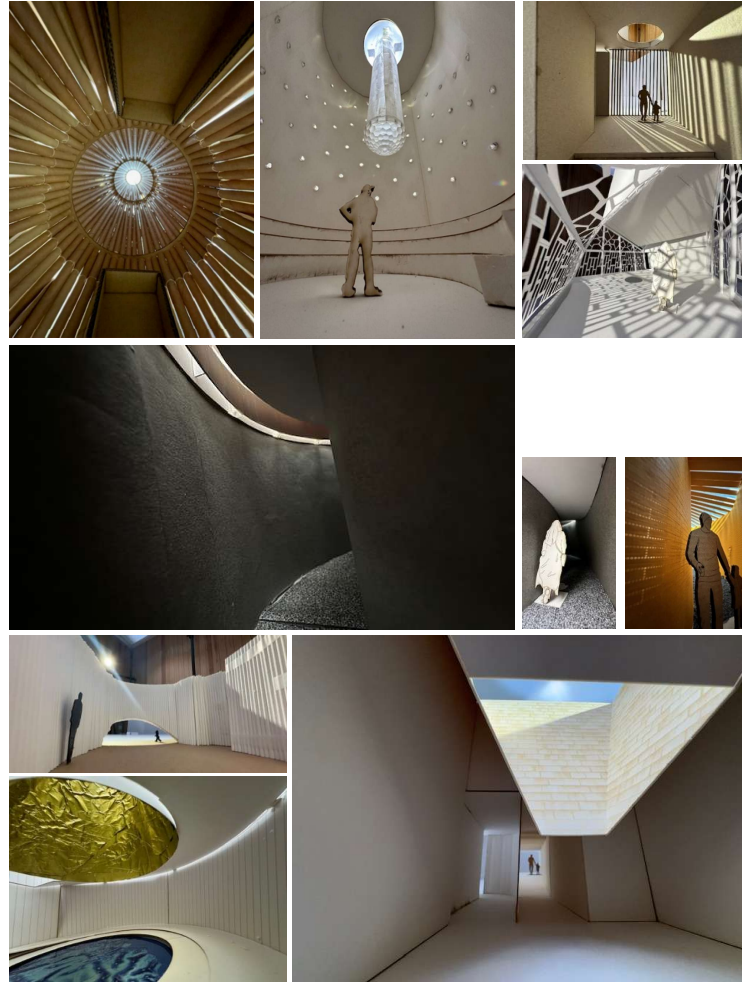
Bridging over research & education

Daylight project / PhD & ALD results 2024

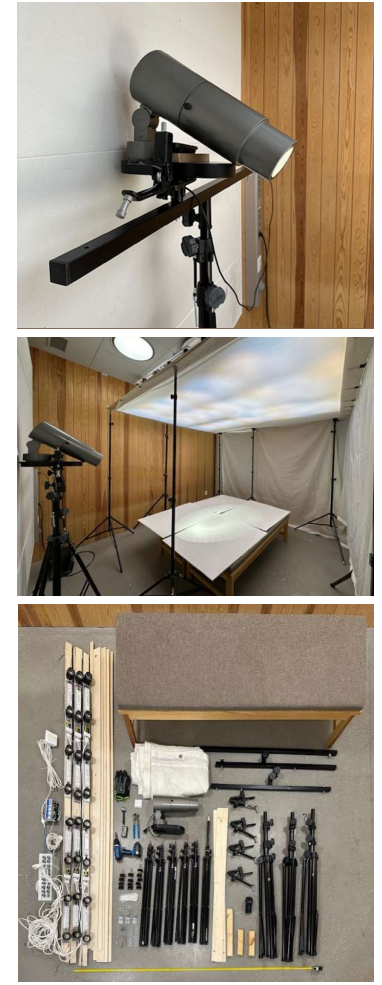
Pin-up final results



Scale models 1:20



Daylight simulator



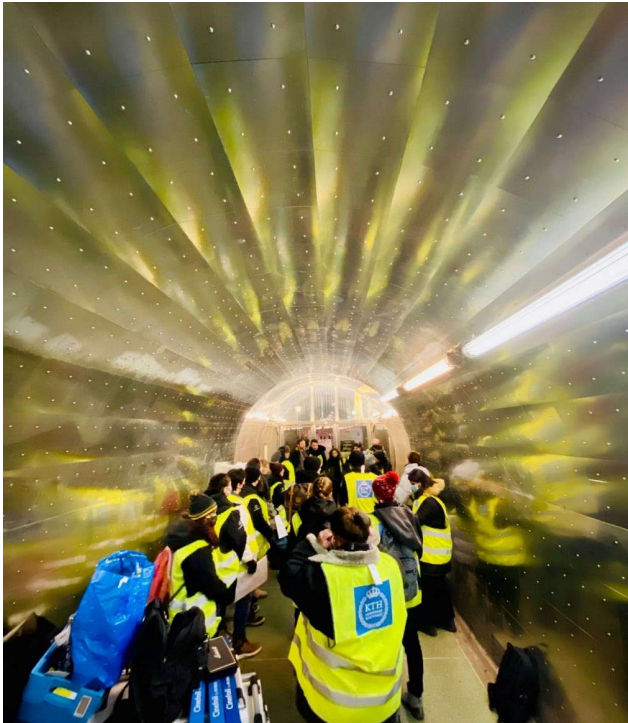
A sense of belonging



Rodrigo Muro och Carl Dahlberg, som i december tilldelades KTH:s pedagogiska pris för 2024. Foto: Christer Gummeson

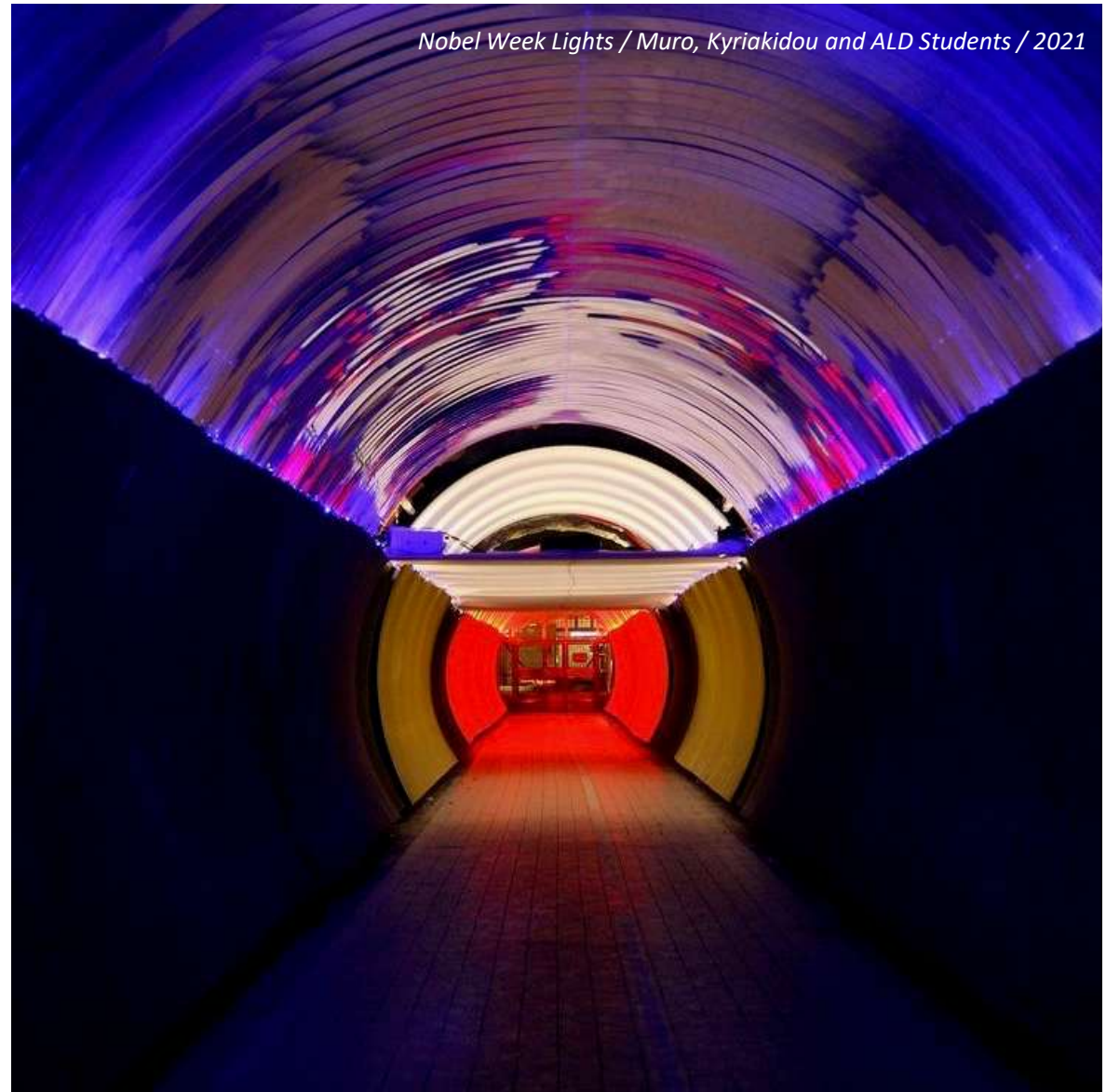


Storträffen / SoTL



Rodrigo Muro

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Nobel Week Lights / Muro, Kyriakidou and ALD Students / 2021



Teaching for the future - today

Taking Learning Seriously



Resources



Challenges





Future Education at KTH

Programme manager Dr. Anna Jerbrant
Storträffen Meetup 20 May 2025

We take the lead for a sustainable society

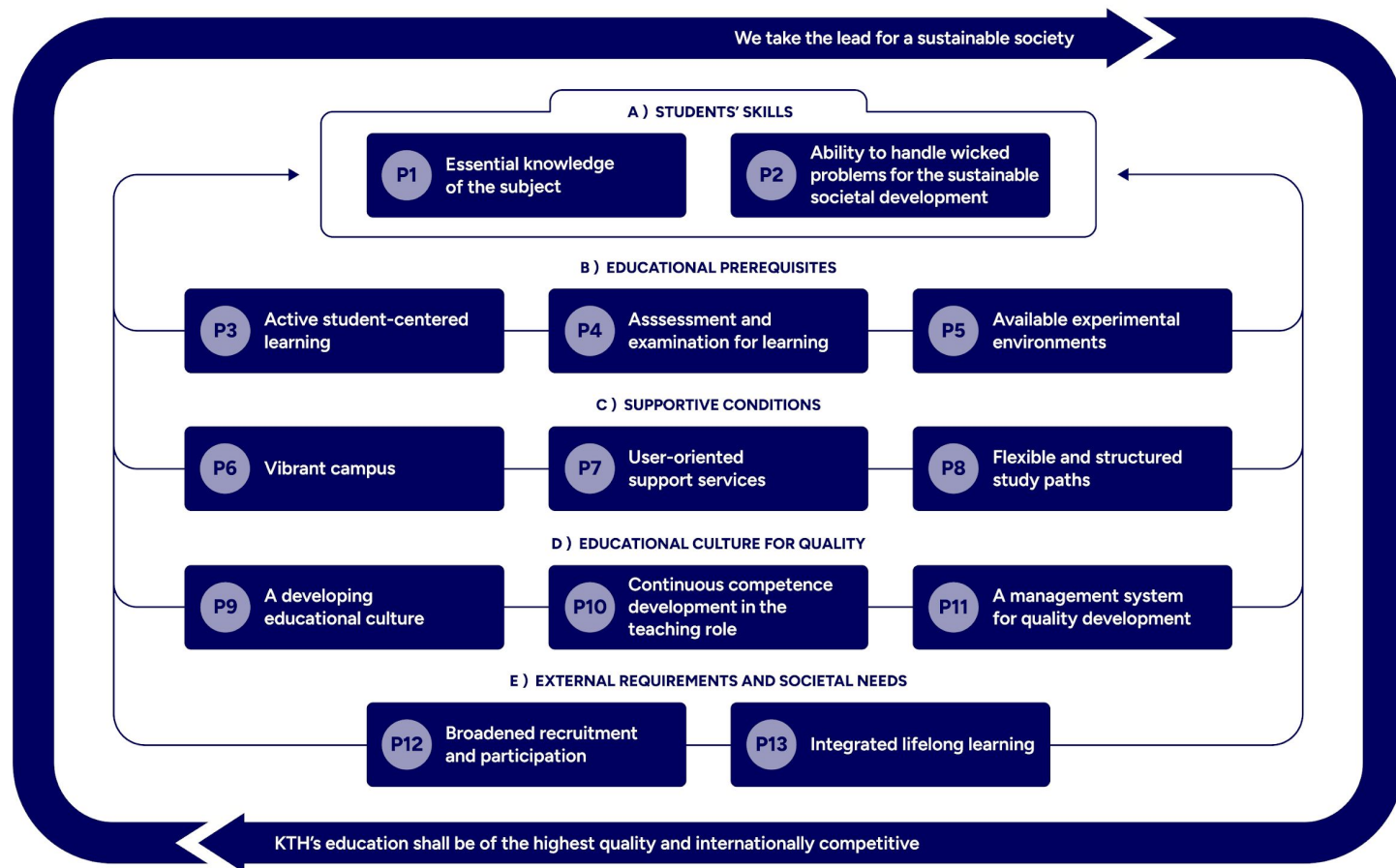
KTH's education shall be of the highest quality and internationally competitive

Future Education is based on principles that should characterise the work on developing KTH's education so that the education programmes remain highly **relevant and attractive** in the increased competition between national and international higher education institutions as well as new educational players.

An important starting point for the work is also **the importance of education for a transformation towards a sustainable society**, in which KTH shall maintain and develop its role."

Decision on principles for Future Education at KTH (V-2022-0380)

The change programme “Future Education at KTH”



Future Education at KTH is a **value-driven** change programme anchored in a **framework** that will enable **proactivity and structure** for the **development** of KTH's education based on a **long-term holistic** perspective.



Development projects – some examples

AI – How to use/integrate AI in teaching/offering

- Develop teachers and students' skills
- Ethical aspects
- Digital guides
- AI-based teaching material

Wicked problems

- Progression in wicked problems
- Wicked problems in a sustainable context
- Wicked problems and societal change
- Wicked problems in project based courses – how to structure the involvement of external stakeholders
- Structuring of project based courses

Digitalisation

- Feasibility study for large-scale examination
- Digital and continuous assessment
- Flexible recorded materials for active learning
- Data-driven admission to Master's programmes
- Integration of physical and remote experimental learning environments
- Digital exams in the preparatory year
- Flexible recorded material for active learning
- Digitalised and synchronised courses – development of the digital teacher role



Project cluster: AI

Integrating AI into KTH's educational offerings

KTH will take the lead in integrating AI skills into education with a platform for a strategically broader basic discussion and pedagogical guidance for how AI can/should/should be integrated into teaching at KTH.

Arnold Pears **Future Education at KTH**

Pure question-based learning (pQBL) with AI-generated learning objectives and activities

Develop pQBL materials in Torus for five courses using generative AI for more effective learning materials for students and reduced course development time for teachers.

Olle Bälter, Ric Glassey **EECS – Electrical Engineering and Computer Science**

Interactive learning with automated feedback and continuous examination (IAK)

Develop a new pedagogical method and a concrete software to, in an introductory programming course, be able to carry out continuous and legally secure examination with learning activities for active learning.

David Broman **EECS – Electrical Engineering and Computer Science**

Model for ethical AI integration in the Master of Science in Industrial Engineering programme

Develop a model for how ethical perspectives can be taught within the subject of industrial engineering to strengthen students' ability to handle ethical dilemmas linked to AI.

Åsa-Karin Engstrand **ITM – Industrial Engineering and Management**

Digital guide for AI integration in industrial economics and management

Develop and test a digital guide for handling AI in teaching and examination related to industrial economics and organization, with the master's degree in technology-based entrepreneurship (TTBEM) as a pilot .

Anna Nyquist **ITM – Industrial Engineering and Management**

AI and learning

The group's focus is on the student perspective, i.e. how should our students know what applies in each course (so that AI does not undermine but helps them achieve the learning objectives).

Nina Wormbs **Faculty Council – Ethics Committee**

Whats going on?

1. **Results** from the projects started in 2024 are presented in Q31
2. Inriktningsbeslut om lärmiljöer
 - There will be a **maxistudio** in KTHB
3. Ruth Grahams **survey on Teaching culture**
4. Possibility to become a **principledare** in Future education
5. The poddhost (for our **Fikasnackspodd**) Marcus Lithander will walk around during the storträff and explore interesting things. Pls talk to him if you want to share your insights

Please don't hesitate to contact us if you want any more information

framtiden@kth.se

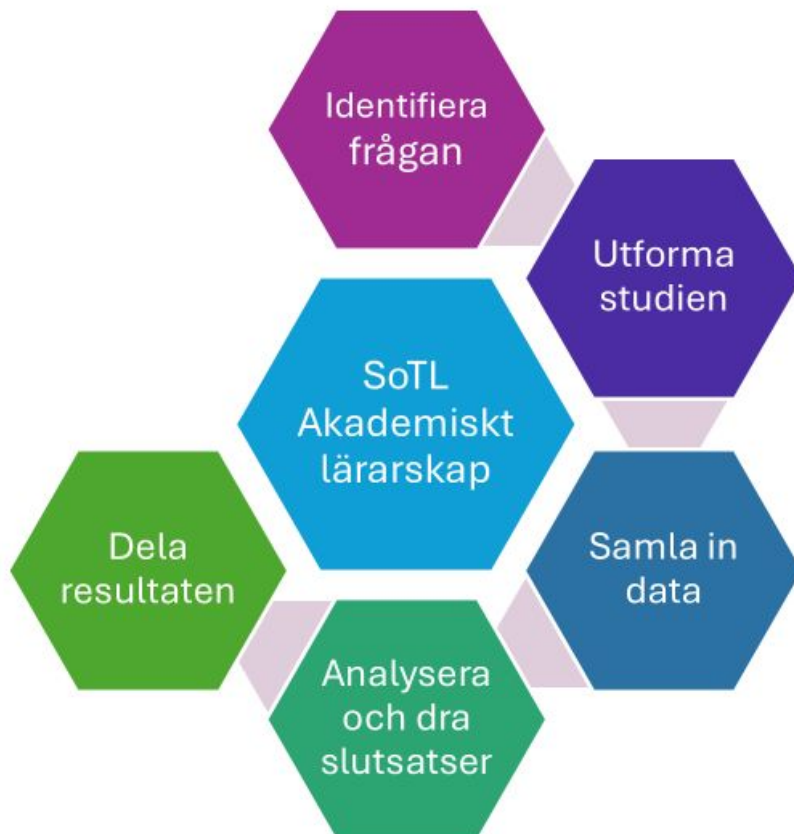
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Scholarship of Teaching and Learning ~~ På KTH sedan 2015 ~~



| Poster Session 11.30 – 12.30 | Room Q34 |
|---|--|
| Ninni Carlsund | <i>Särskild Behörighet på en kurs gör skillnad</i> |
| Anita Kullen, Tobias Oechtering, Tomas Karlsson | <i>Student Essays in Times of Generative AI</i> |

| Session 1, 13:25-14:00 | Room Q34 |
|--|---|
| Thashmee Karunaratne, Elisabet Lökvist | <i>Data-Informed Education (DInE) at KTH- From theory to practice</i> |
| Imane Bayane | <i>Enhancing Active Learning through Generative AI: A Case Study in Structural Dynamics Education</i> |
| Magnus Andersson | <i>Student assessment of a questionnaire used during external master admission</i> |

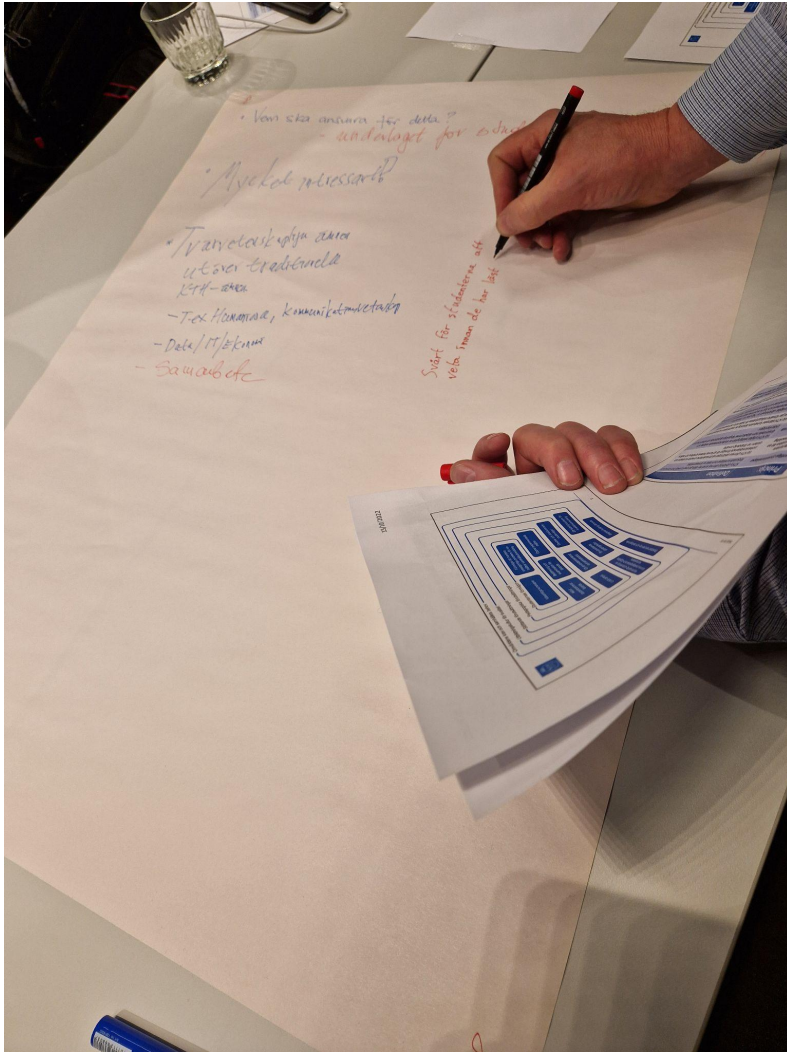
| Session 2, 14:10-14:45 | Room Q34 |
|---------------------------------|---|
| Pontus Juth, Magdalena Svanberg | <i>AI-drivna forskningsassistenter: En undersökning</i> |
| Niclas Hjelm, Joakim Dalfors | <i>Kan gruppövningar varje vecka öka lärandet i matematik</i> |
| Viggo Kann | <i>Vad gör studenterna när dom inte är på lektionen?</i> |

| Session 3, 15:15-15:50 | Room Q34 |
|--|---|
| Lars Uppvall, Pontus Wadström | <i>Engaging with Engineering Education: Industry Partners' Motivations and Experiences in Problem- and Project-Based Learning Courses</i> |
| Sofia Strömqvist | <i>Design for all: Facilitating the involvement of cognitive diversity in students design projects</i> |
| Emma Riese, Olle Bälter, Tomas Ekholm, Ric Glassey, Viggo Kann | <i>Experiences, Impacts and Implications of a STINT Teaching Sabbatical</i> |

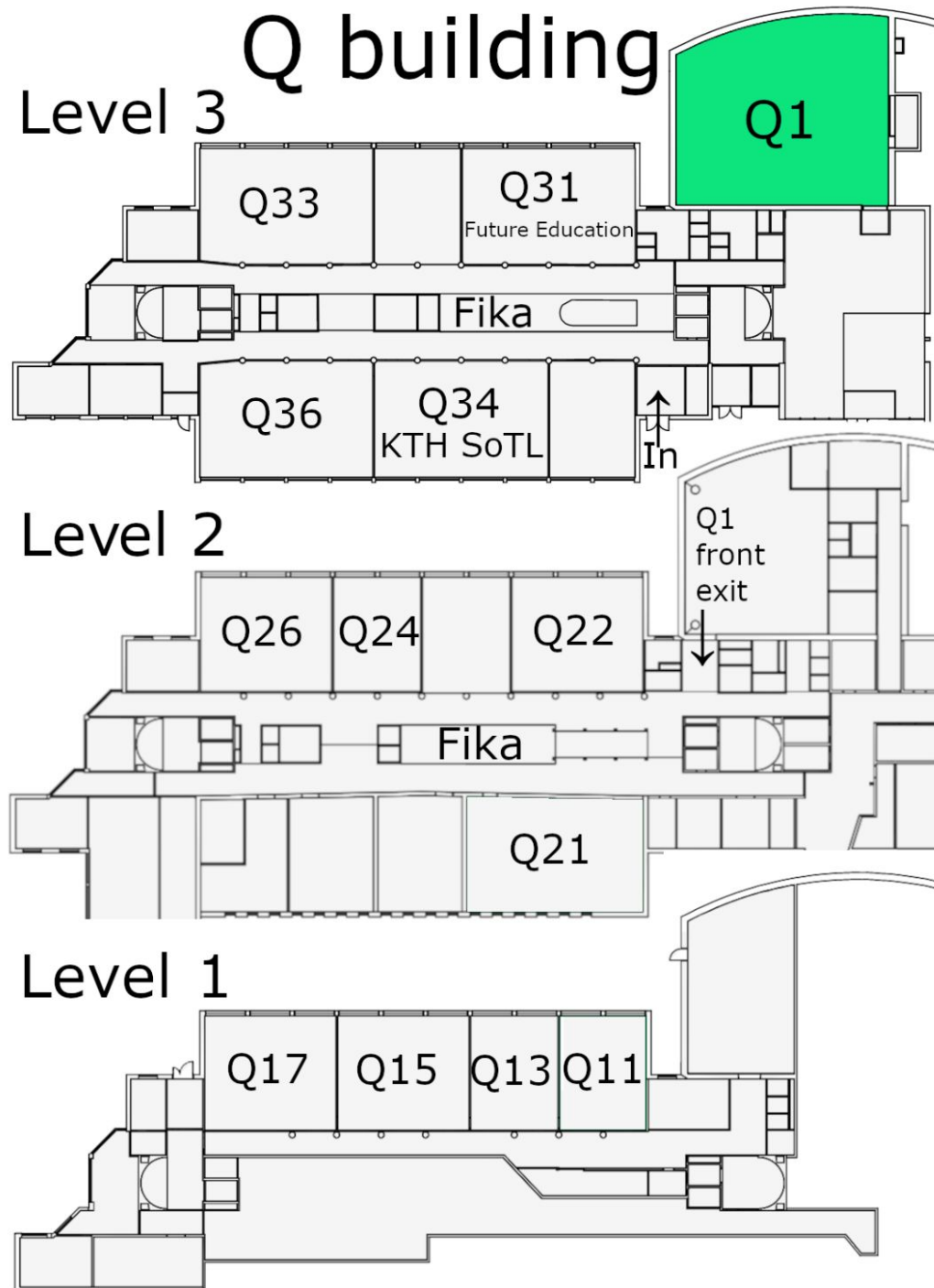
| Keynote, 16.00 | Room Q1 |
|----------------|--|
| Suzanne Brink | <i>Designing Courses and Programmes from Learner Experience Perspectives</i> |

Today's schedule

- 13:25-14:00 Round 1 of discussions
- 14:10-14:45 Round 2 of discussions
- 14:45-15:15 Fika at level 2 and 3
- 15:15-15:50 Round 3 of discussions
- 16:00-16:45 Summary and conclusion in Q1
- 16:45-18:00 After-talk and mingle in the entrance hall or outside



| Topics for discussions, workshops, oral presentations etc. at Storträffen Meetup and KTH SoTL May 20, 2025 | Rounds | | | Room |
|--|--------------------------|--------------------------|--------------------------|------------|
| | 1 13:25 14:00 | 2 14:10 14:45 | 3 15:15 15:50 | |
| KTH SoTL posters; 3 oral presentations per round, see separate programme | en | sv | en | Q34 |
| Future education posters and discussions | | | | Q31 |
| 1 Discussion: New ways of teaching the new digitally savvy student (PriU) | en | sv | | Q33 |
| 2 Discussion: How could an AI-chatbot be of help in your course? (PriU) | | en | sv | Q36 |
| 3 Discussion: Peer assessment as a learning activity and a time-saving strategy (PriU) | sv | en | | Q26 |
| 4 Discussion: Assessing the process not the product in an AI universe | en | | | Q36 |
| 5 Diskussion: Anonym examination | | | sv | Q21 |
| 6 Diskussion: Sapere Aude - eget ansvar för lärandet | | sv | | Q17 |
| 7 Discussion: Higher education pedagogy development with today's resources and challenges (PriU) | en | | | Q22 |
| 8 Discussion: Sustainable development in education – How far have we come, and what's the next step? (PriU) | | en | | Q21 |
| 9 Discussion: PriU JML - What needs and interests do we have in meeting? (PriU) | | | en | Q24 |
| 10 Diskussion: Pressen på det amerikanska forskningssystemet - vad kan vi göra här? | | | sv | Q26 |
| 11 Workshop: Dynamic flexible responsive course and programme design | | en | | Q24 |
| 12 Workshop: Bring a text and let us use it to create a formative quiz in Canvas with the help of AI | en/sv | | | Q31 |
| 13 Workshop: Breddat deltagande | sv | | | Q17 |
| 14 Workshop: Course evaluation - strategies for higher response rates | | | en | Q22 |
| 15 Workshop: Hur kan KTH:s forskning och utbildning inom hållbarhet gestaltas i en utställning för jubileumsåret 2027? | | sv | sv | Q11 |
| 16 Walking seminar: How can we encourage more students to participate in the classes? | | | en/sv | Q entrance |
| 17 Collect input: En ny språkpolicy för KTH / A new language policy for KTH | | | en/sv | Q33 |
| 18 Collect input: Data-informed teaching and Canvas New Analytics | | | en | Q15 |
| 19 Hör mera om och diskutera: THS-rapporter om studieplatsinventering och behov av öppet campus (PriU) | sv | | | Q21 |
| 20 Hör mera om och diskutera: Presumtiva studenter - målgrupper med STEM-potential | | sv | | Q13 |
| 21 Learn more and discuss: Electric Mobility - learnings from phase 1 in the future education project | | en | | Q31 |
| 22 Learn more and discuss: Faster upskilling - KTH's courses for professionals | en | | | Q24 |
| 23 Learn more and discuss: FuSam - KTH-wide coordination of doctoral education matters | en | | | Q15 |
| 24 Learn more and discuss: What is the role and responsibility of co-supervisors? Should the role be clarified? | | en | | Q15 |
| 25 Learn more and discuss: How do expectation documents and supervisor panels contribute to the development of doctoral supervision? | | | en | Q13 |
| 26 Learn more about: Digital guide for AI integration in industrial economics and management | en | | | Q13 |
| 27 Hör mera om: Behörighetskrav till kurser och program | | | sv | Q31 |
| 28 Learn more about: Strategic partnerships as a resource for education (PriU) | | en/sv | | Q22 |
| 29 Hör mera om: Digital uppdragsutbildning inom livslångt lärande | | | sv | Q17 |
| 30 Demo: Stöd för kursriktlinjer om användning av generativ AI | sv | | | Q11 |



Pitch text document

