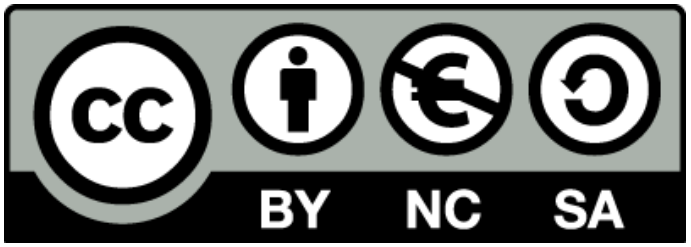
Innovative STEM Education
The Pedagogical Model
Learn STEM

by Christian M. Stracke
Open University of the Netherlands
@ Learn STEM Online Course 2020
Live event: 2020-04-28

Open Universiteit
www.ou.nl



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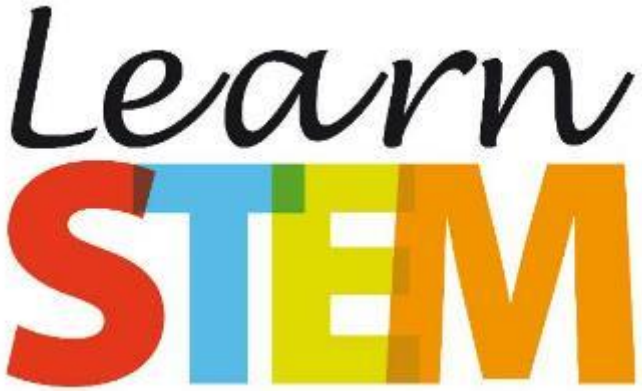
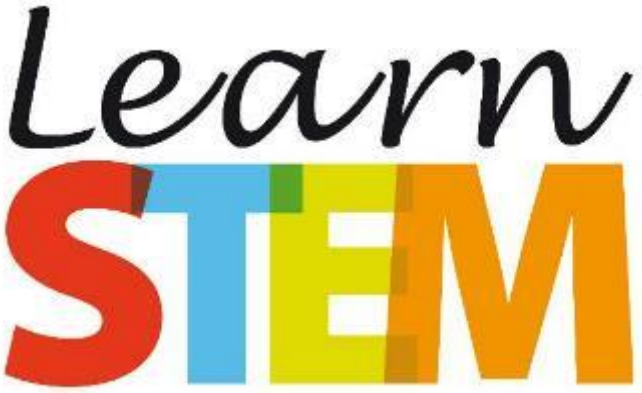
Welcome to our



Online Course!

What is



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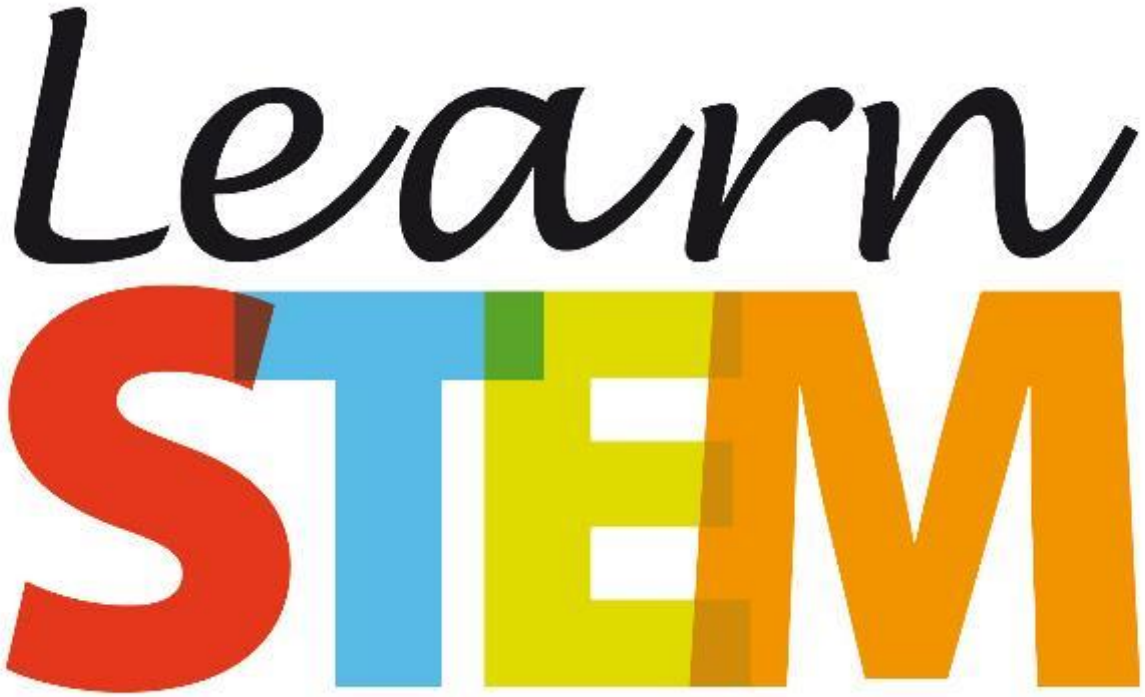
STEM = Science, Technology, Engineering, & Mathematics (= MINT)

We are



We are Learn STEM

Learn STEM network

madan parque de ciencia

Kaunas Science and Technology Park

KAUNO SIMONO DAUKANTO PROGIMNAZIJA

WILDAU

EEKHOUT ACADEMY

Learn STEM

www.Learn-STEM.org

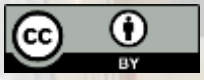
Open School Education

www.Learn-STEM.org

Learn STEM for you

Results from Mixed Methods research:

- **Pedagogical Model**
- **Teacher Training Programme**
- **Open Online Course (March 2020)**



Free to use & to adapt!

www.Learn-STEM.org

Learn STEM Online Course

Started: 26th of March 2020

4 weeks plus intro (started 12th of March 2020)

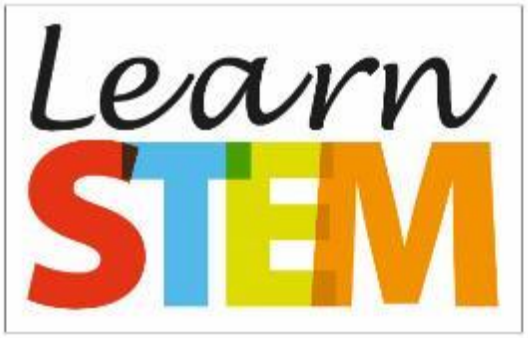
www.competencedevelopment.eu

www.Learn-STEM.org

Learn
STEM

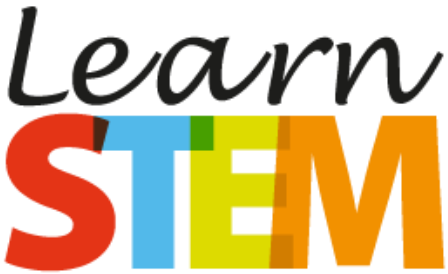
Learn STEM: Pedagogical innovations for STEM education OUNL

ENROLL IN LEARNSTEM



How do you GRADE our Learn STEM Online Course?

Please go online to: www.menti.com and use the code: 94 12 25



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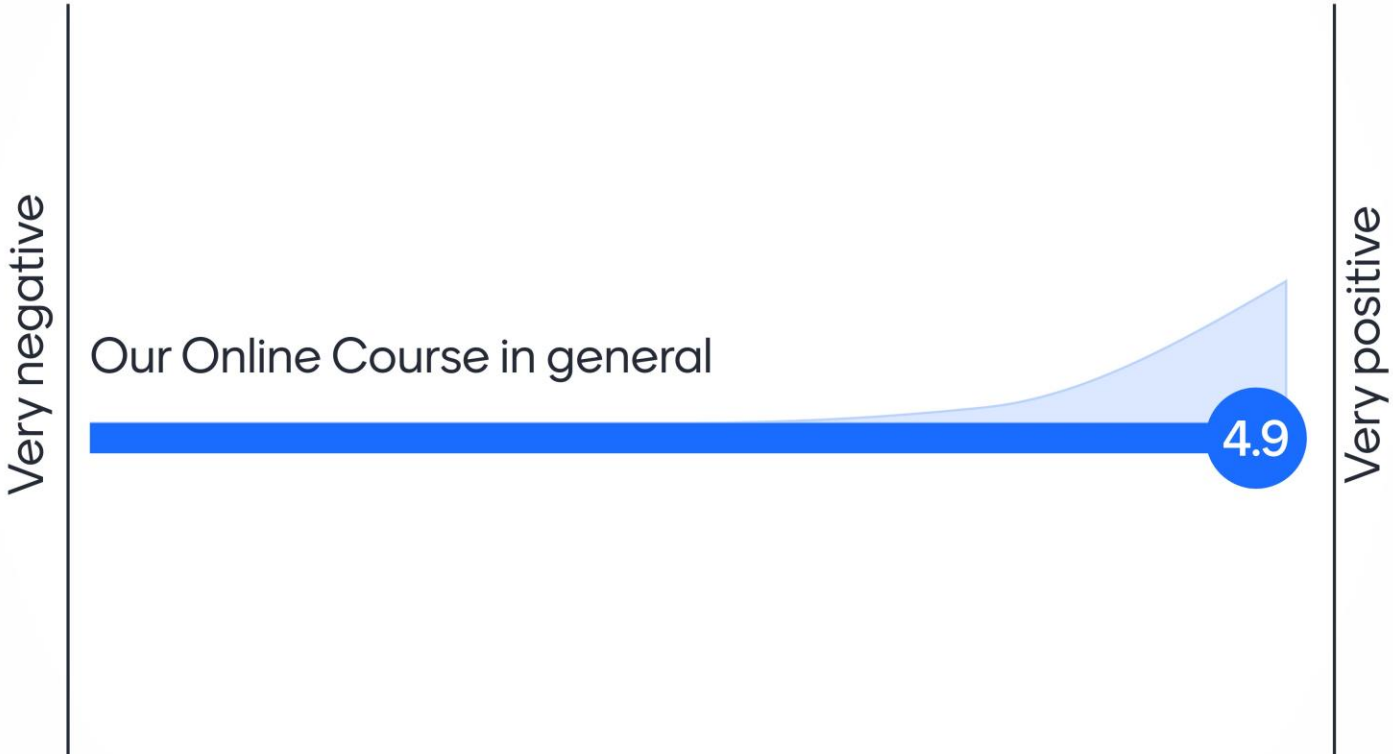
Learn STEM

Mentimeter

How do you grade our Online Course today?



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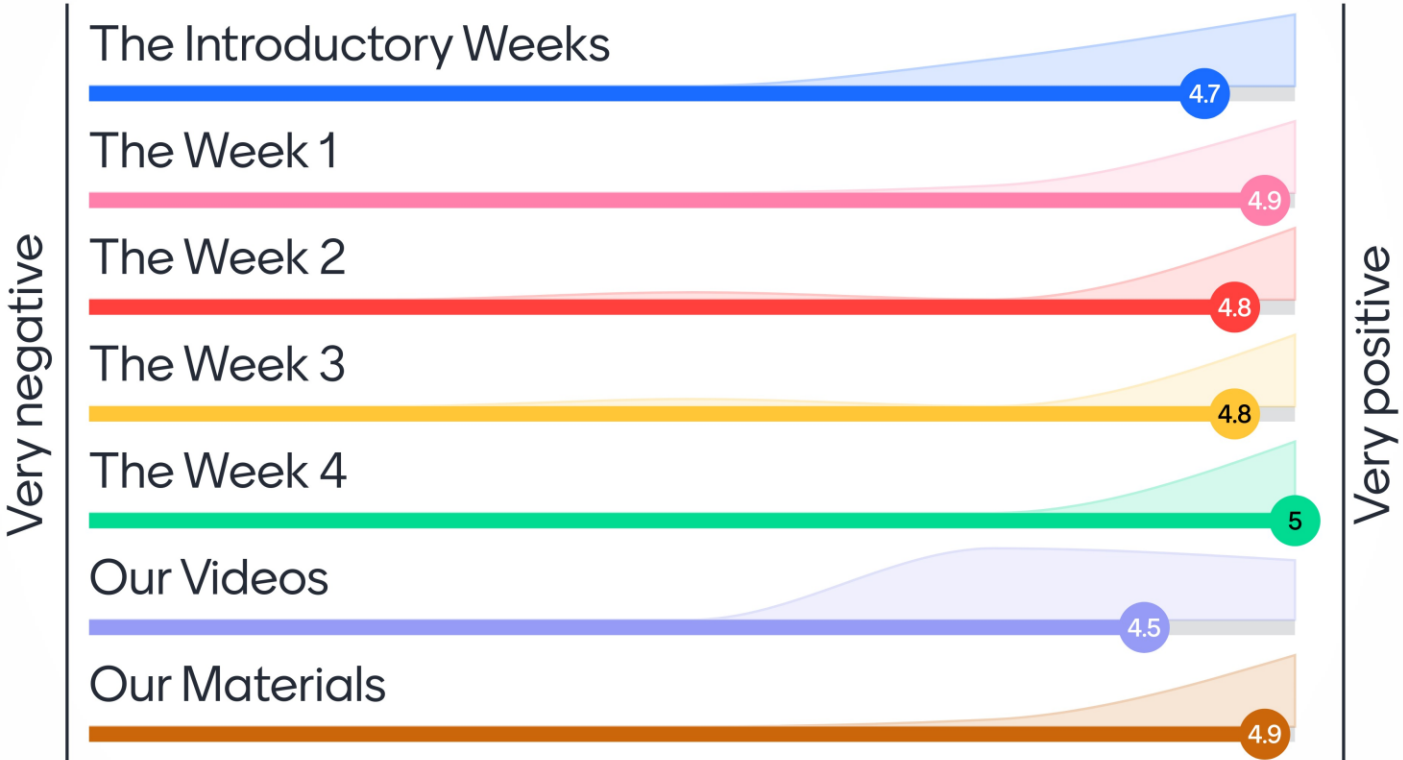
Learn STEM

Mentimeter

How do your grade our Online Course in details?



Pedagogical Model

COMPLEX
PROCESS-ORIENTED
HOLISTIC
PRACTICAL
SOCIAL

Free & open download:
www.Learn-STEM.org/Model

CC BY

Learn STEM

STEM assessment

Key questions of STEM assessment:

- **Why do you assess?**
- **Who should do the assessment?**
- **What do you assess?**
- **How do you assess?**

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What do you THINK about our Innovative STEM Assessment?

Please add your comments, opinions, questions, etc. online to:
https://padlet.com/christian_stracke/LearnSTEM2020_Assessment

or use:

Our expert today

Torunn Gjelsvik

from the International Council for Open and Distance Education (www.ICDE.org)

Free & open up- & download:
https://surfdrive.surf.nl/files/index.php/s/lBIcN3cyMGJzhnp

Torunn Gjelsvik

from the International Council for Open and Distance Education (www.ICDE.org)

"#Learningtogether Campaign"

Free & open up- & download:
https://surfdrive.surf.nl/files/index.php/s/lBIcN3cyMGJzhnp

Our free online tools

1. Plickers
2. ZipGrade
3. Badgecraft

Please remember our important warning on privacy and data protection (from week 3) for you as teacher!

Free & open up- & download:
https://surfdrive.surf.nl/files/index.php/s/lBIcN3cyMGJzhnp

Your free online tools

Have you uploaded your own good practice examples and cases?

Free & open up- & download:
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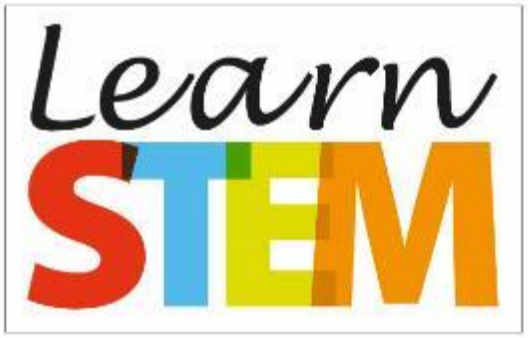
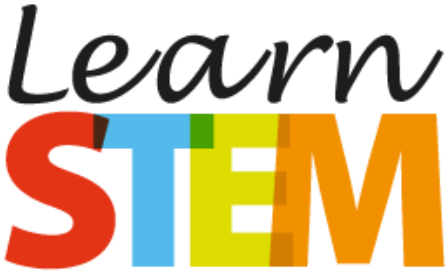


How do you GRADE our Online Course Live event today?

Please go online to: www.menti.com and use the code: 31 47 3



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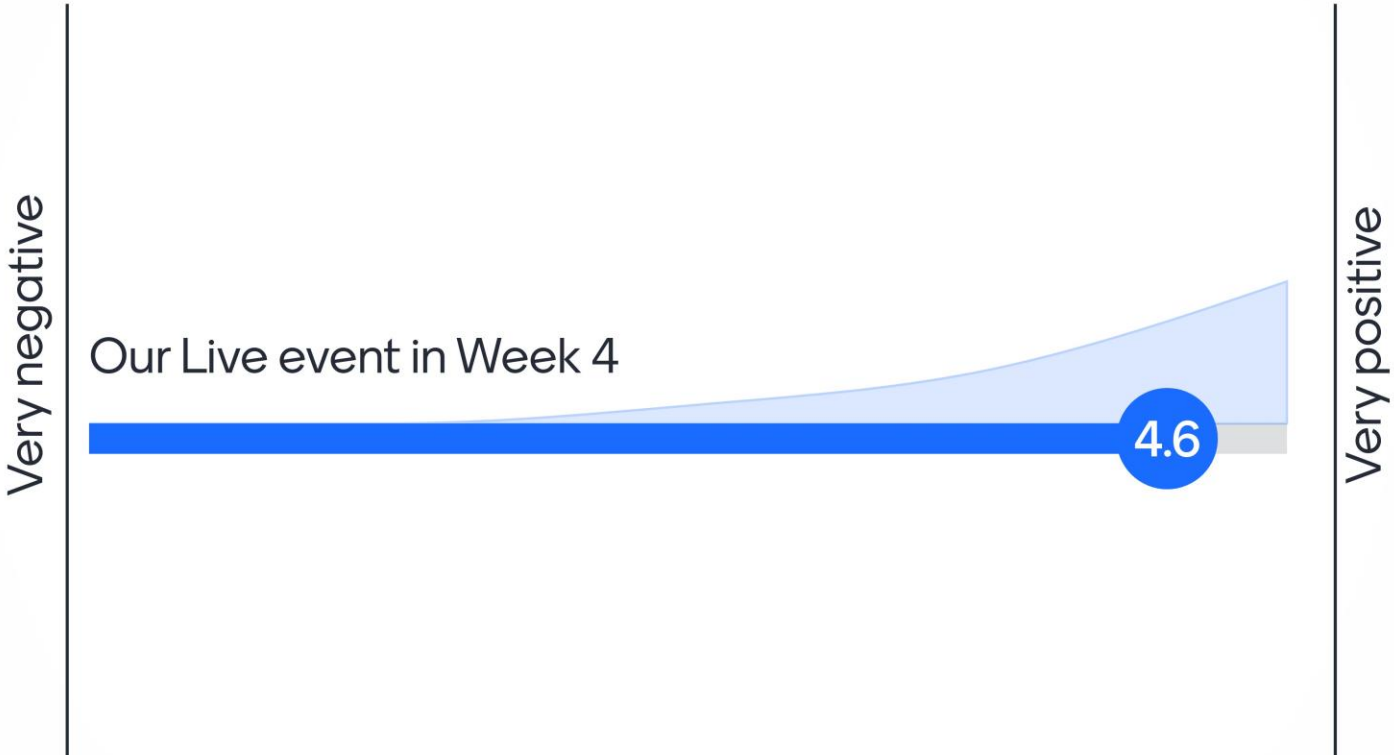
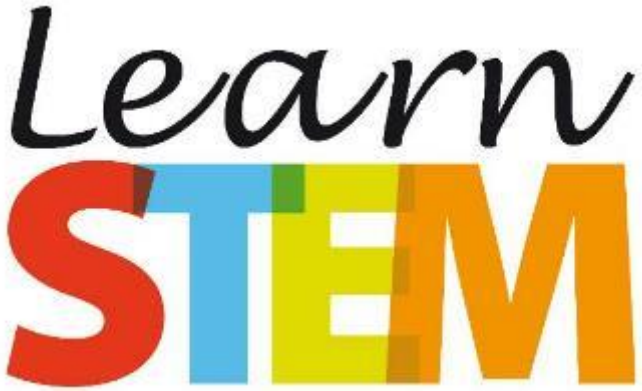
Mentimeter

Please grade our Live event in Week 4 today!

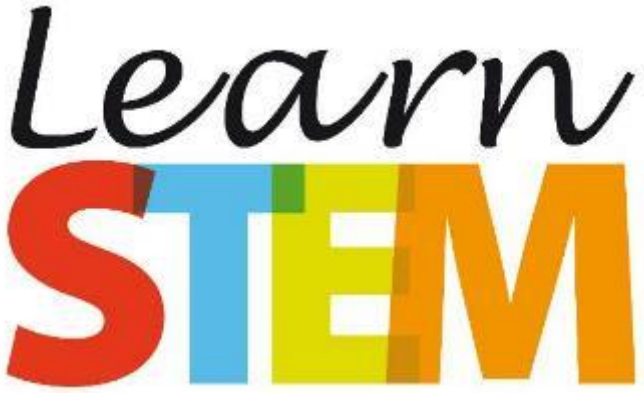


The last Week 4 of our



Online Course!

The end of



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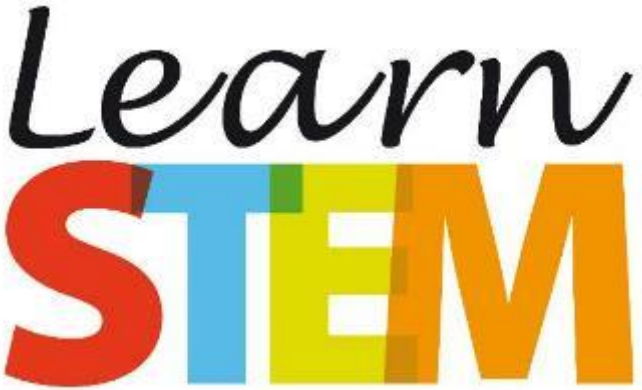
The end of



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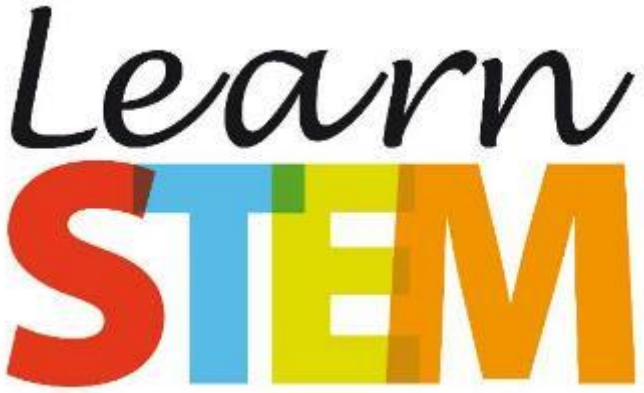
No:

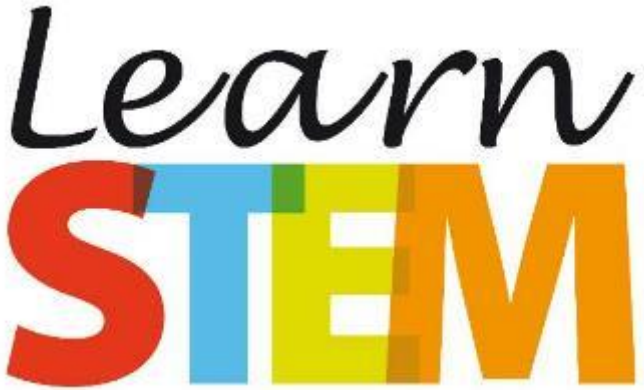
Just the beginning!

The further steps of



Next week:
Our outlook for the future!

Outlook for the future

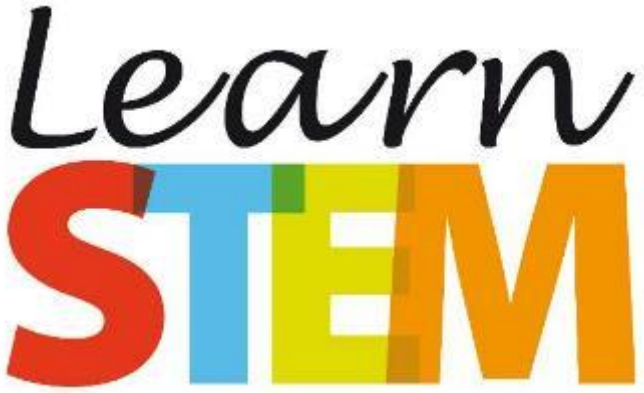


1. Our survey

2. Our guide collection:

"How to start online learning"!

Outlook for the future



And most important: Our future collaboration!

Learn STEM References

Stracke, C. M., van Dijk, G., Fasen, J., Lisdat, F., & Simoens, W. (2020). A Holistic Pedagogical Model for STEM learning and education inside and outside the classroom. In HCI International 2020 Conference Proceedings. Springer Lecture Notes in Computer Science (LNCS). (accepted, in print).

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All also online available at: http://www.opening-up.education

Let us cooperate!

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My affiliations

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Adjunct Professor for E-Learning
Korean National Open University

Advisory Professor for E-Learning
East China Normal University

Founder & Director of eLC, the European Institute for Learning, Innovation & Cooperation

My experiences

> 20 years E-Learning in business & academia

Research Institute leadership and strategic development

> 20 years design, realization, evaluation & optimization of study programs and courses

100+ International Projects: with > € 50 Mio. budgets and > € 4.8 Mio. own funding

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