

# **Innovative STEM Education**

# **The Pedagogical Model**

# **Learn STEM**



**by Christian M. Stracke**  
**Open University of the Netherlands**  
**@ Learn STEM Online Course 2020**  
**Live event: 2020-04-07**

**Open Universiteit**  
[www.ou.nl](http://www.ou.nl)





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**Welcome to our**

*Learn*  
**STEM**

**Online Course!**

# What is *Learn* **STEM** ?

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

**We are**

*Learn*

**STEM**

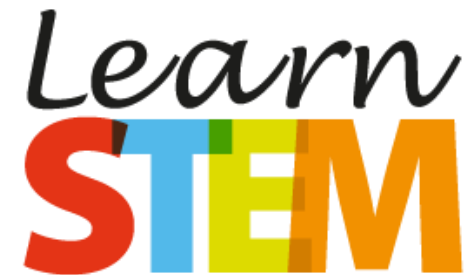
# We are *Learn* **STEM**



# Learn STEM network



EEKHOUT  
- ACADEMY -



[www.Learn-STEM.org](http://www.Learn-STEM.org)

# Open School Education

[www.Learn-STEM.org](http://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](http://www.Learn-STEM.org)

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education 

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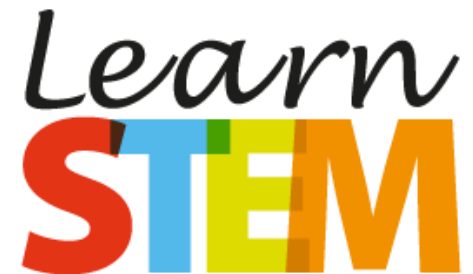
**Learn STEM Online Course**

**Started: 26th of March 2020**


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

**[www.competencedevelopment.eu](http://www.competencedevelopment.eu)**

**[www.Learn-STEM.org](http://www.Learn-STEM.org)**



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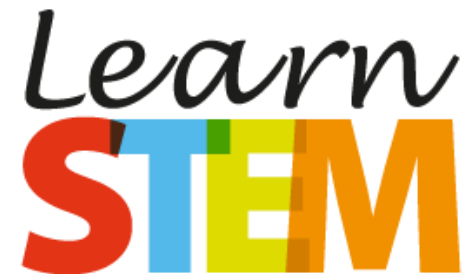
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**How do you GRADE our**  
**Learn STEM Online Course?**

**Please go online to: [www.menti.com](http://www.menti.com)**  
**and use the code: 37 16 82**



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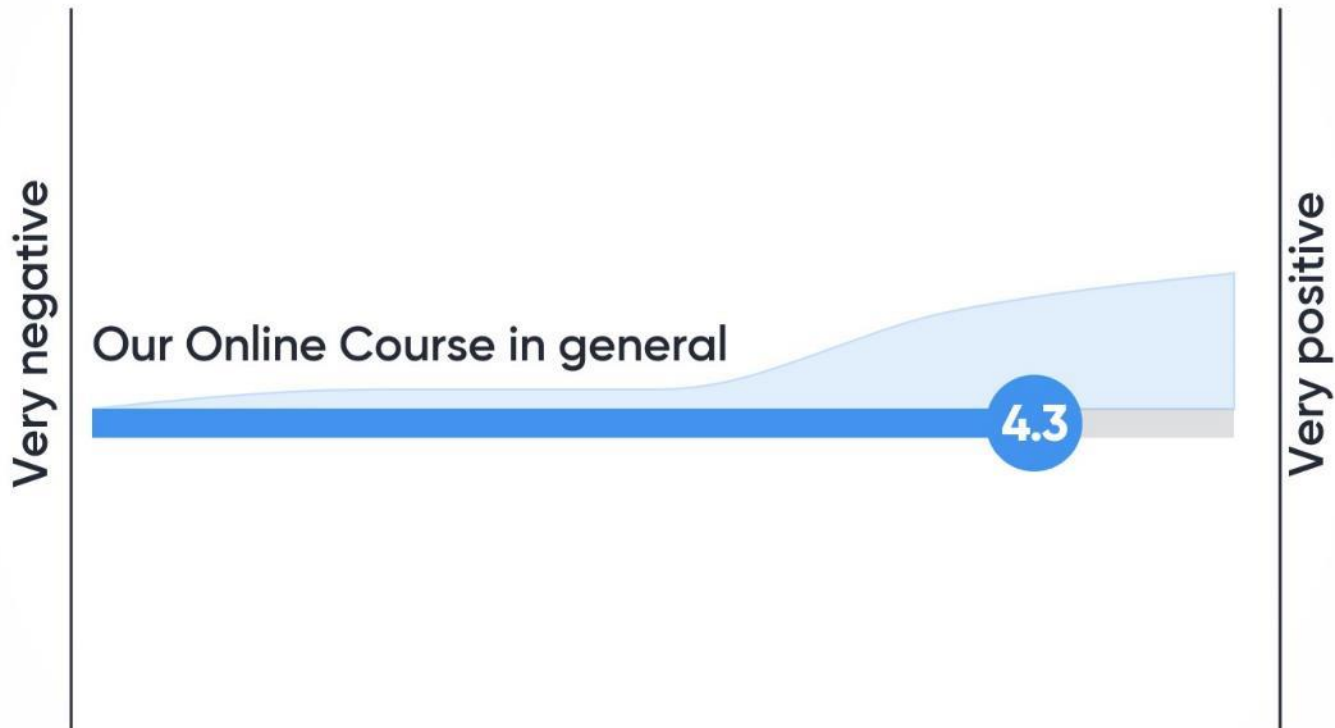
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## How do you grade our Online Course today?



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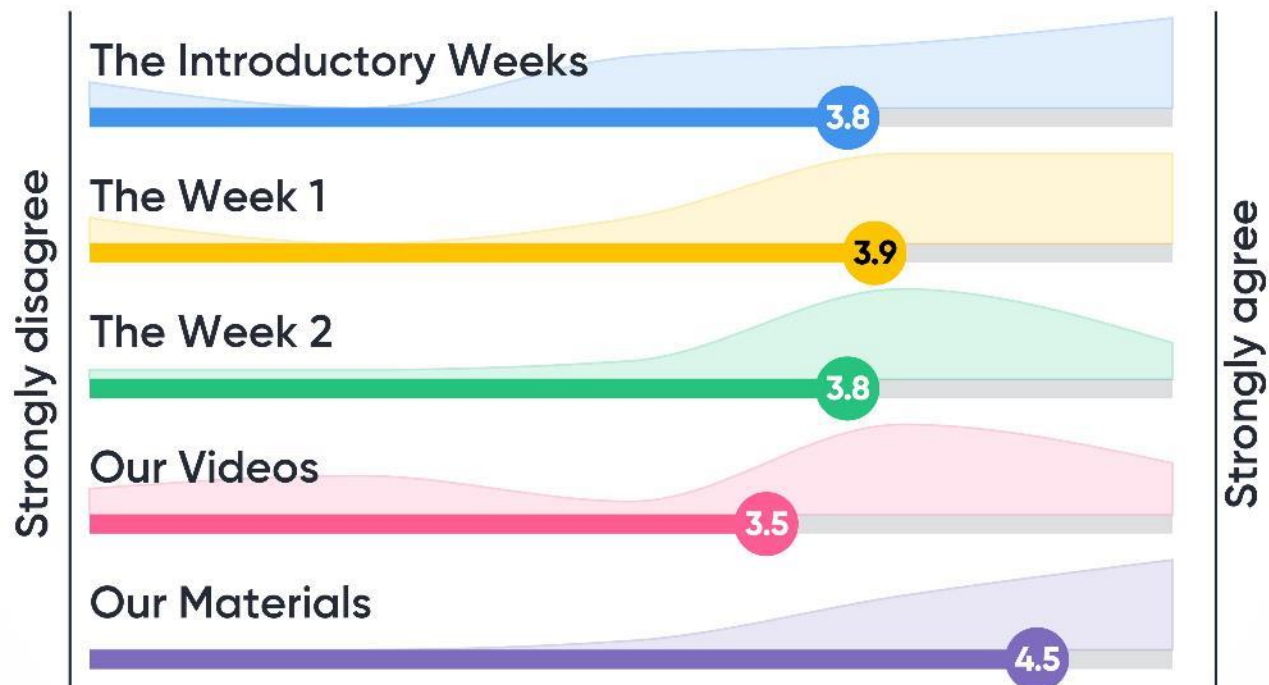
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Mentimeter

# How do you grade our Online Course in details?



# Pedagogical Model

COMPLEX

PROCESS-ORIENTED

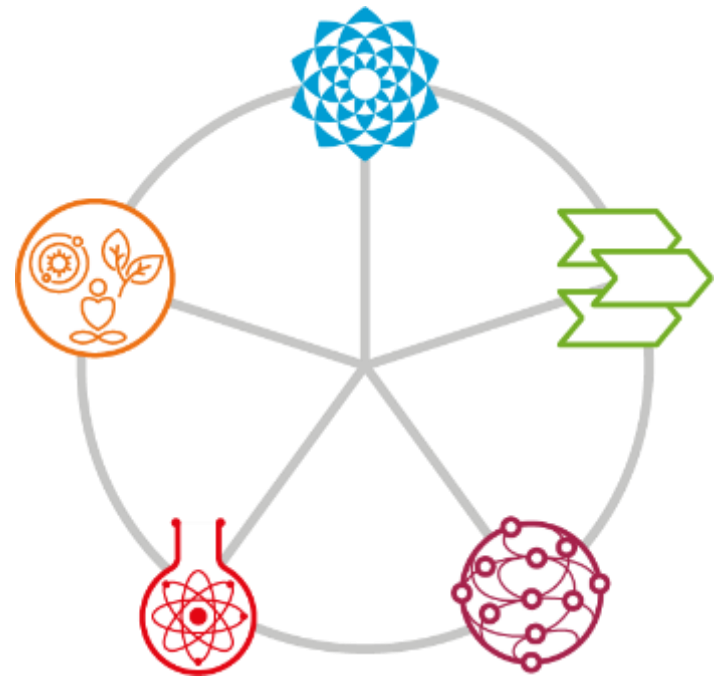
HOLISTIC

PRACTICAL

SOCIAL

Free & open download:

[www.Learn-STEM.org/Model](http://www.Learn-STEM.org/Model)



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# Phases for Learners


Oh, DEAR! Model:

Iterative cycles:

- **D**iscover
- **E**xplore
- **A**pply
- **R**eflect



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## What do you THINK about our Phases and Learner-centred STEM Education?

Please add your comments, opinions, questions, etc. online to:  
[https://padlet.com/christian\\_stracke/LearnSTEM2020\\_Learners](https://padlet.com/christian_stracke/LearnSTEM2020_Learners)

or use:



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# Our free online tools

- **Our Inquiry Learning Package**
- **Online boards for collaboration**
- **Online tools for creating videos**
- **Collections of different tools**



Free & open up- & download:

<https://surfdrive.surf.nl/files/index.php/s/8s3SWzVlokWFBep>


# Your free online tools

Have you uploaded  
your own good  
practice examples  
and cases?



Free & open up- & download:

<https://surfdrive.surf.nl/files/index.php/s/8s3SWzVlokWFBep>

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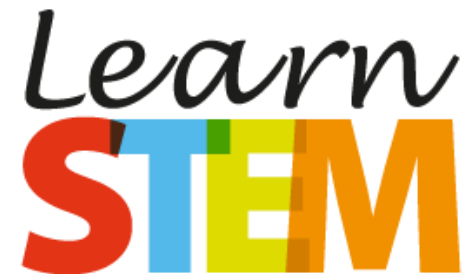
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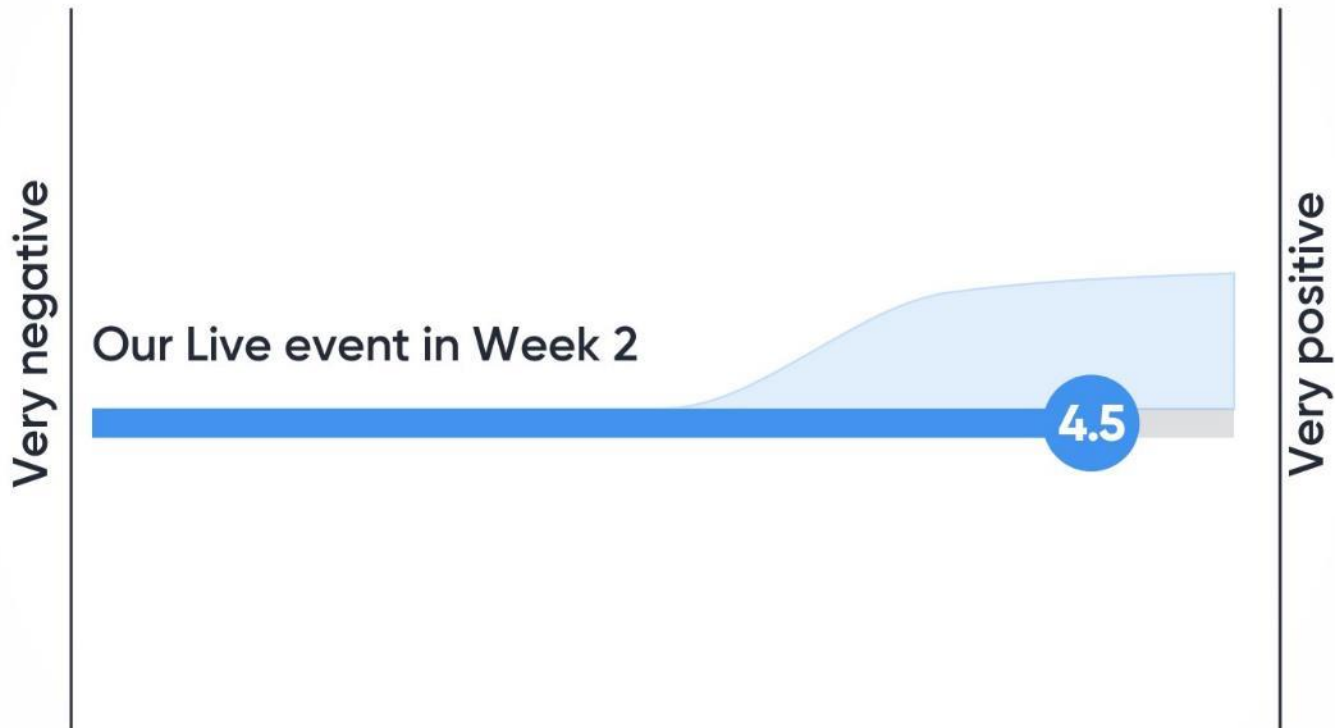
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Please grade our Live event in Week 2 today!



# Learn STEM References

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Stracke, C. M. (2015). The Need to Change Education towards Open Learning. In C. M. Stracke & T. Shamarina-Heidenreich (Eds.), *The Need for Change in Education: Openness as Default?* (pp. 11-23). Berlin: Logos.  
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All also online available at: <http://www.opening-up.education>

# Let us cooperate!



[christian.stracke@ou.nl](mailto:christian.stracke@ou.nl)



**@ChrMStracke**

[www.opening-up.education](http://www.opening-up.education)



# My affiliations

**ICDE Chair in OER & Associate  
Professor for Open Education  
Open University of the Netherlands**



**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**





# Let us collaborate!



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