A Holistic Pedagogical Model for STEM education in schools

by Christian M. Stracke et al.

Open University of the Netherlands
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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
My interests

Innovative Open Education in Schools & Higher Education

Media Literacy, Self-Reflection and Critical Thinking as Key Competences

Learning Design for Online Collaboration & Personalization

Global initiative ICORE for OR & OE

International LINQ Conference
How can we improve STEM education?
We are Learn STEM
Learn STEM network

www.learn-STEM.org
Learn STEM objective

We want to improve STEM education in schools!

www.learn-STEM.org
What is Open Education?
OpenEd Framework

Explorative Pedagogies
The four phases of Oh, DEAR!

Teacher cycle

Learner cycle

www.opening-up.education
What is Open School Education?
What is LearnSTEM?
Open STEM Learning

Learn STEM for school innovations:

- Pedagogical Model for Open STEM
- Innovative open tools and resources
- Teacher training and OER materials

www.learn-STEM.org
Pedagogical Model

COMPLEX
PROCESS-ORIENTED
HOLISTIC
PRACTICAL
SOCIAL

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

LINQ 2019 Conference in Roermond
22nd of November 2019

Our Workshop today:
www.learning-innovations.eu

www.learn-STEM.org
Learn STEM events

Learn STEM Conference in Roermond

Thursday, 26th of March 2020

Join us!

www.learn-STEM.org
We need Change in Education!
We need Open Quality Education!
We need Open Quality Education! ... with fun!
Open Education is a Vision that is happening!

Quality is most important for our situation & learners

Inclusion and equity for all to improve our Global Society!
Further References


Further References


All also online available at: [http://www.opening-up.education](http://www.opening-up.education)
Further References


Stracke, C. M. (2016). Is Open Education a revolution or are MOOCs only marketing instruments? Online Proceedings of the Open Education Global Conference 2016.


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