### **KU LEUVEN**



# MOOCs

Kenny Verbeke





# MOOC?

**KU LEUVEN** 

### What is a MOOC?

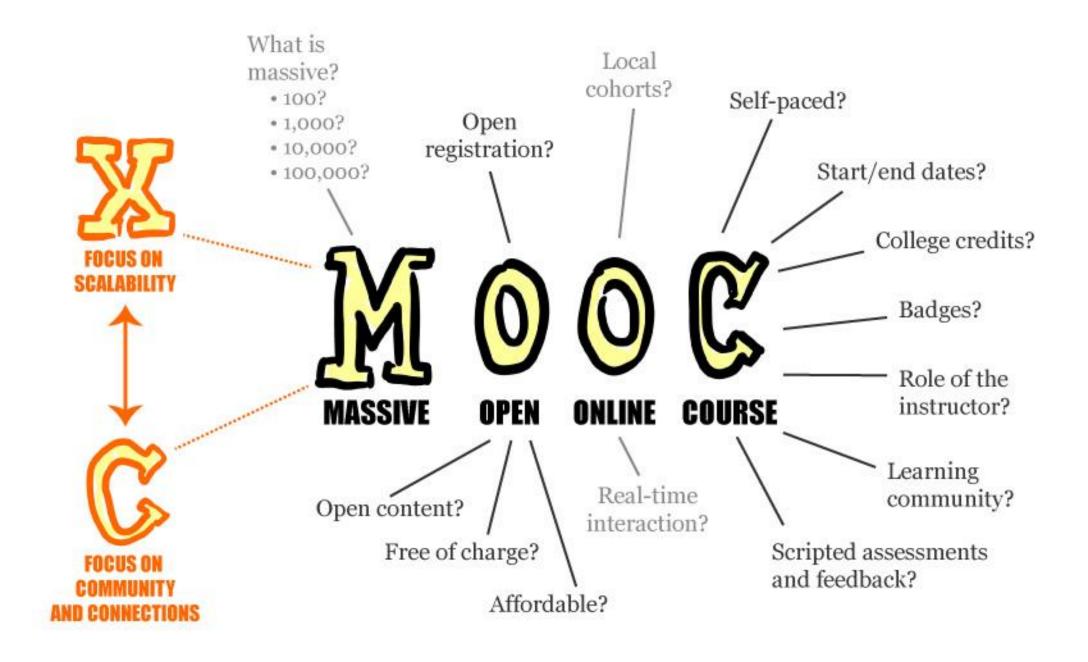
### Massive Open Online Course

- Online
- Course
- Open to the public
- Aimed at large numbers of enrollment (Massive)
- Free

### **MOOC** Toolset

- Focus on "Massive" aspect
  - Learners in a MOOC want immediate feedback
    - Multiple choice, multiple answer, coding excersises, drag and drop, ...
  - You can't give individual feedback
  - You can't give individual points
  - You can't review papers
  - No adaptive release like in Toledo







Current Self-Paced



Terrorism and Counterterrorism

Current Self-Paced



Introduction to Health and Wellness

Starting Soon Starts: October 10, 2016



The Book: The History of

the Book in the 17th and...

Archived

Starts: September 21, 2015 - Self-

Paced









Upcoming Starts: January 10, 2017



Starting Soon Starts: October 12, 2016 Upcoming Starts: August 18, 2016 - Self-Paced Upcoming Starts: April 1, 2016 - Self-Paced

# **Types**

- Paced
  - Course duration equals start and end date MOOC
  - Each week the majority of learners is focused on the contents of that week
  - Community/learners help each other
  - Learners have to invest time during the weeks the MOOC is active
- Self-paced/on demand
  - MOOC is available during several months but the course itself is shorter
  - Learners decide when the want to complete MOOC (flexible)
  - Less activity (in comparison with paced MOOC)



### Verified track

- By default every MOOC is free
- Learners invest a lot of time to complete MOOC
- Demand for proof > Verified certificate







and

#### W. Eric L. Grimson

Bernard Gordon Professor of Medical Engineering Chancellor for Academic Advancement Massachusetts Institute of Technology

Dugald C. Jackson Professor of Computer Science and Electrical Engineering Massachusetts Institute of Technology

Sanjay Sarma

Director of Digital Learning Massachusetts Institute of Technology

This is to certify that

## Kenny Verbeke

successfully completed and received a passing grade in

6.00.1x: Introduction to Computer Science and **Programming Using Python** 

a course of study offered by MITx, an online learning initiative of The Massachusetts Institute of Technology through edX.

You have Your verifi

Your final

VERIFIED CERTIFICATE Issued March 13th, 2015

Verify the authenticity of this certificate at

https://verify.edx.org/cert/0ffb15d74cf24d239206aa722365a899

d Course

te (PDF)

o profile

#### **CLASS CENTRAL**







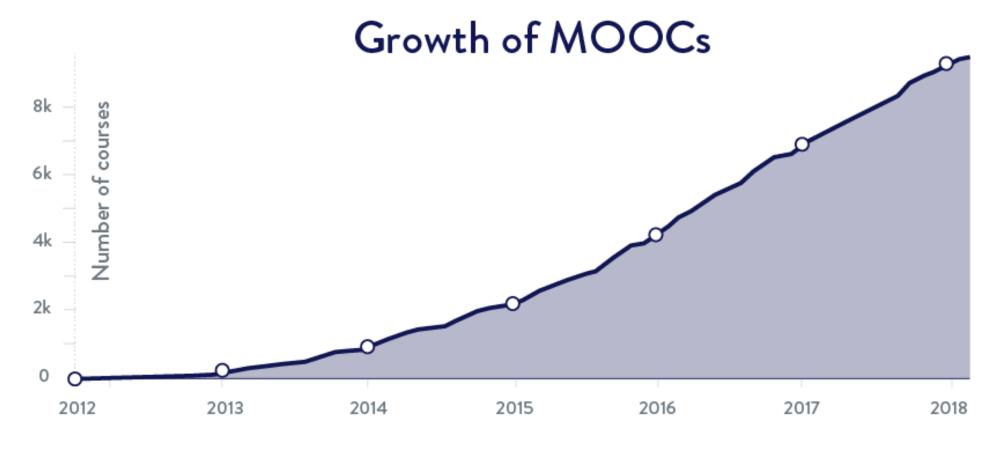
By the Numbers: MOOCs in 2017

Opmerking: grafiek van jan 2018

Ref: https://www.class-central.com/report/mooc-stats-2017/



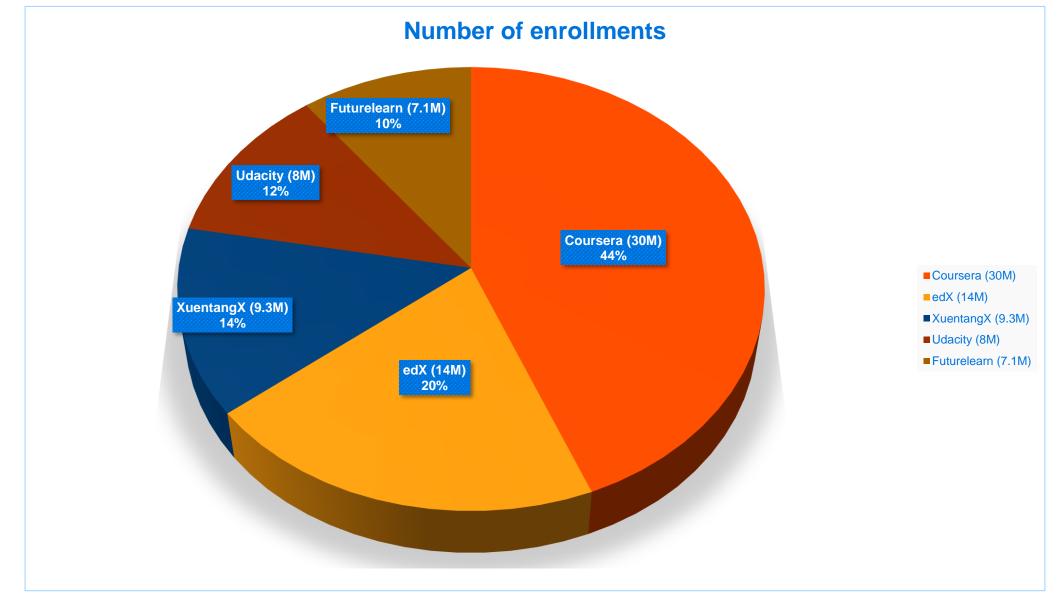
### **CLASS CENTRAL**



By the Numbers: MOOCs in 2017

Graph from Jan 2018
Ref: https://www.class-central.com/report/mooc-stats-2017/



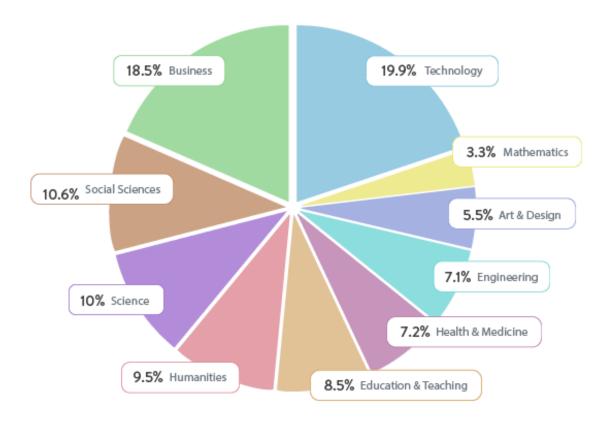


Graph from Jan 2018
Ref: https://www.class-central.com/report/mooc-stats-2017/



#### **CLASS CENTRAL**

# Course Distribution by Subject



By the Numbers: MOOCs in 2017

Graph from Jan 2018

Ref: https://www.class-central.com/report/mooc-stats-2017/



#### **CLASS CENTRAL**

#### MOOC-based credentials

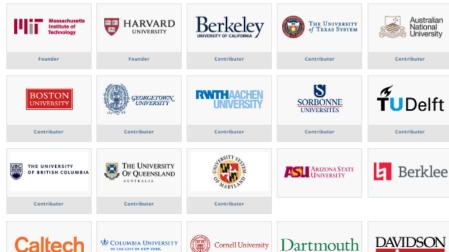
Credential	No. of credentials
<b>Specializations</b> by <i>Coursera</i>	257
<b>Professional Education</b> by <i>edX</i>	64
<b>MicroMasters</b> by <i>edX</i>	43
<b>Professional Certificate</b> by <i>edX</i>	35
<b>XSeries</b> by <i>edX</i>	32
<b>Programs</b> by FutureLearn	22
<b>Nanodegrees</b> by <i>Udacity</i>	22
<b>Programs</b> by <i>Kadenze</i>	21
<b>Micro-degrees</b> by <i>XuetangX</i>	8

Opmerking: grafiek van jan 2018

Ref: https://www.class-central.com/report/mooc-stats-2017/





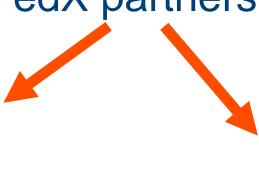


Georgia Tech

京都大学 KYOTO UNIVERSITY

UC San Diego

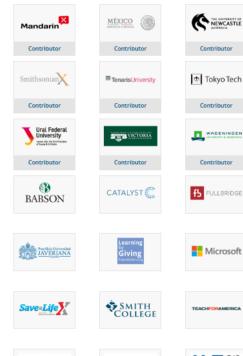
NOTRE DAME











TENNESSEE

Colgate

Contributor

Contributor

• ITMO UNIVERSITY

Contributor

Contributor

**IDB** 

Contributor

Contributor

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Contributor

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▶ 早稲田大学

Contributor

MUDD COLLEGE

MongoDB University

**CHALMERS** 

Contributor

Hamilton

Contributor

**ISRAEL**X

Contributor







SANVERSITY OF THE BUTTWATERSHAND SCHOOLSESSES



Imperial College

🐼 北京大学

翻泔秋学

THE UNIVERSITY OF HONG KONG

London



**ETH** zürich

PRINCETON UNIVERSITY

UCL Université catholique

UNIVERSITY OF MICHIGAN





UNIVERSITY OF OXFORD

THE HONG KONG UNIVERSITY OF SCIENCE AND TECHNOLOGY

**KU LEUVEN** 

SEOUL NATIONAL

IIT Bombay

₩ McGill

THE HNIVERSTY

ТШП



# MOOC language

- Content
  - Most MOOCs are in English (broadest reach > massive aspect)
  - Other popular MOOC languages: Chinese and French
  - One Dutch MOOC on edX (programmeren voor kinderen in Scratch)
- Interface (buttons, controls,...)
  - English, Spanish, French, Chinese, Portugese
  - Crowdsourcing: <u>Transifex</u>



# Pilots

# MOOC: pilot projects

### LIPS: Trends in e-Psychology

Psychology course linked to Lectures in Psychology Series (LIPS) (B-KUL-P0R60A)



Trends in e-Psychology

KULeuvenX - ePSYx Started - Nov 17, 2015

View Course

### GRAPH: The Great War and Modern Philosophy

Philosophy course linked to Contemporary Philosophical Texts: Phenomenology (B-KUL-W0EM4A)



The Great War and Modern Philosophy

KULeuvenX - GRAPHx Started - Oct 27, 2015



### FRAME: The EU and Human Rights

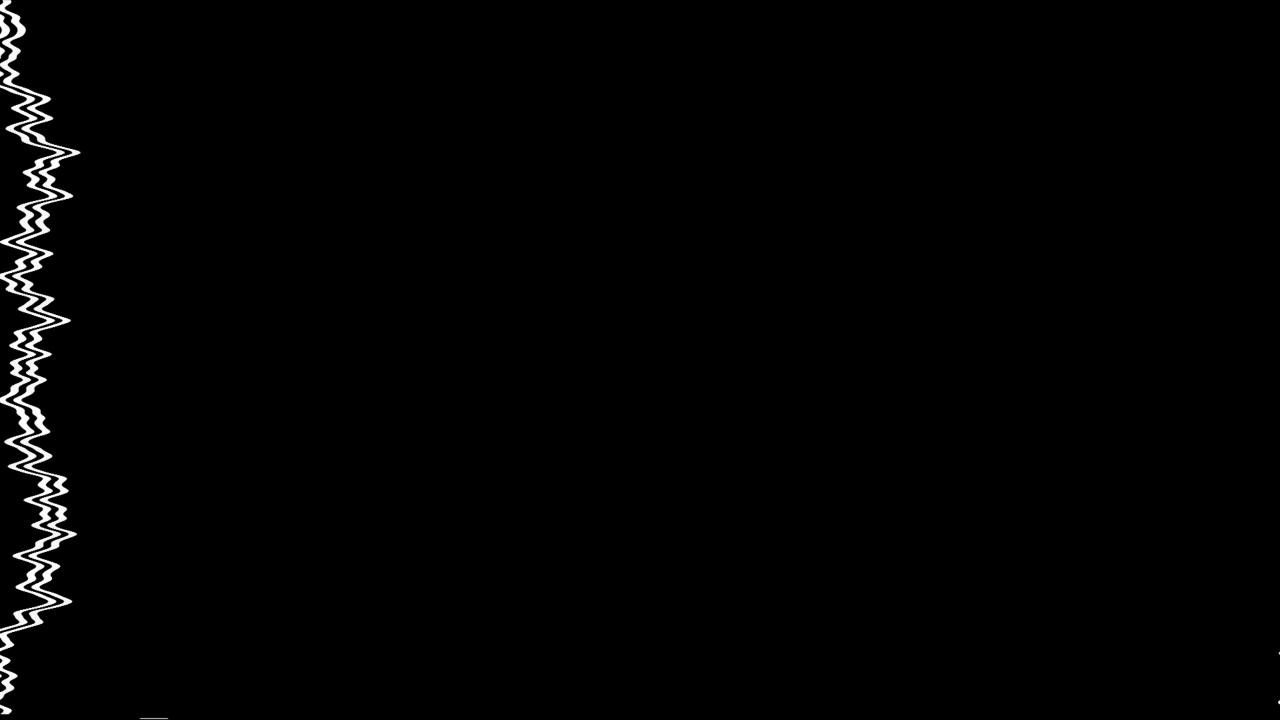
Law/policy course as deliverable for European FP7 project

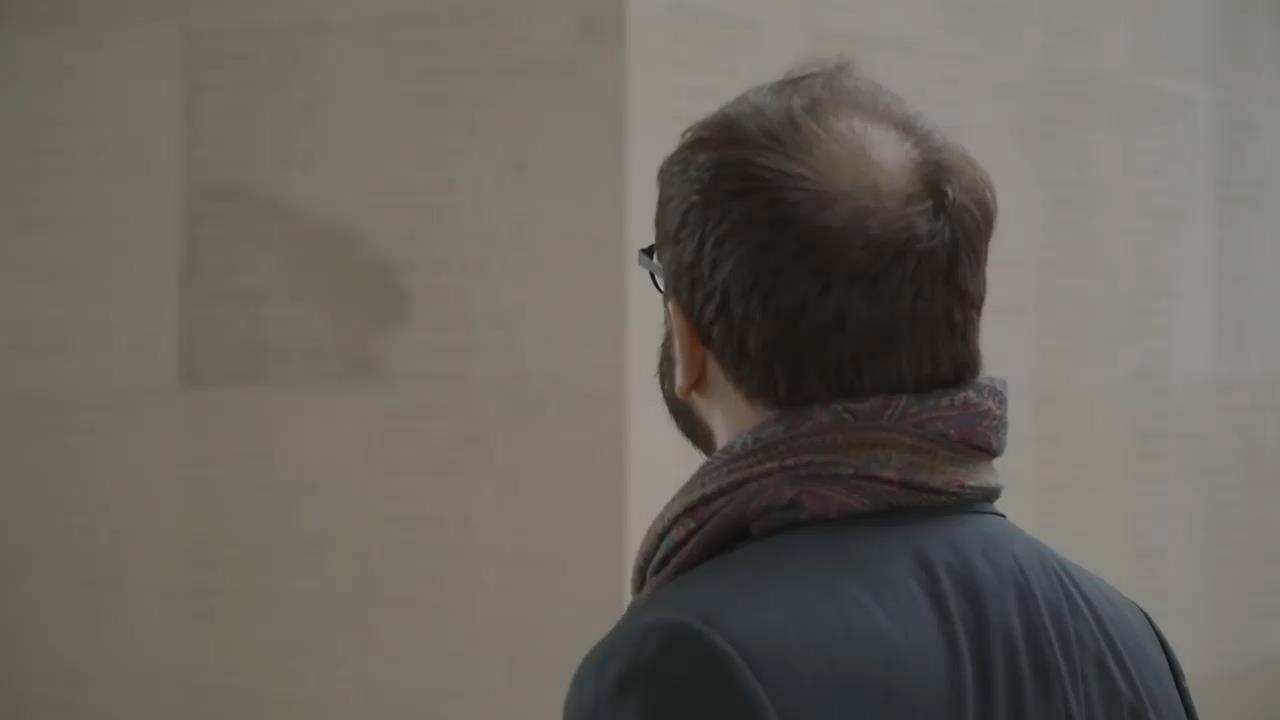


The EU and Human Rights

KULeuvenX - EUHURIx Started - Oct 17, 2015

View Course

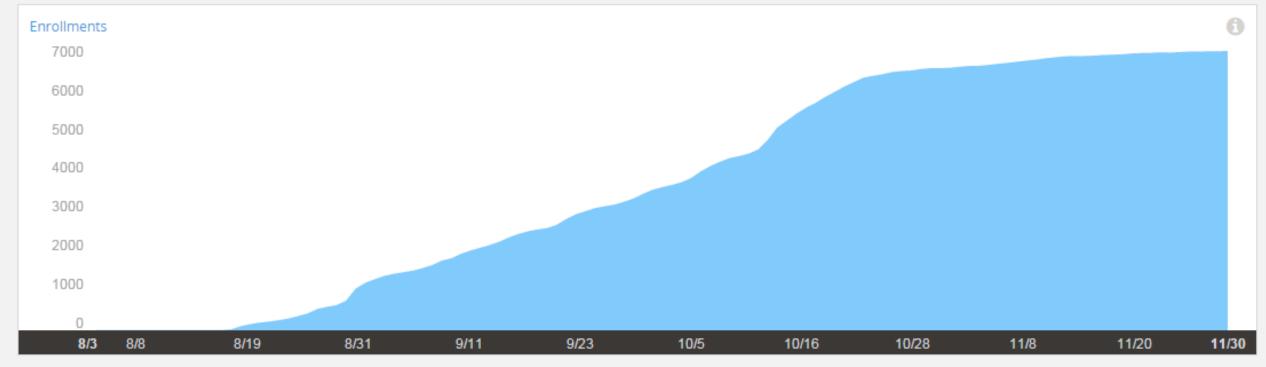






### **FRAME**

How many students are in my course?



#### **Enrollment Metrics**

8,100

0

**Total Enrollment** 

7,206

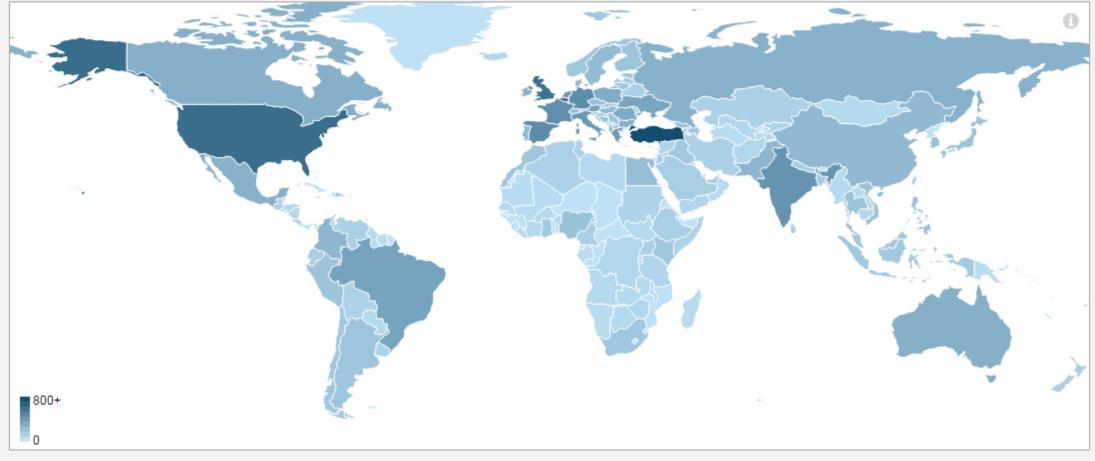
0

**Current Enrollment** 

36

0

Change in Last Week



# **FRAME**

0

### **Geography Metrics**

171
Total Countries
Represented

### Turkey

Top Country by Enrollment

11% of students

Belgium

Second Country by Enrollment

7% of students

### **United States**

Third Country by Enrollment

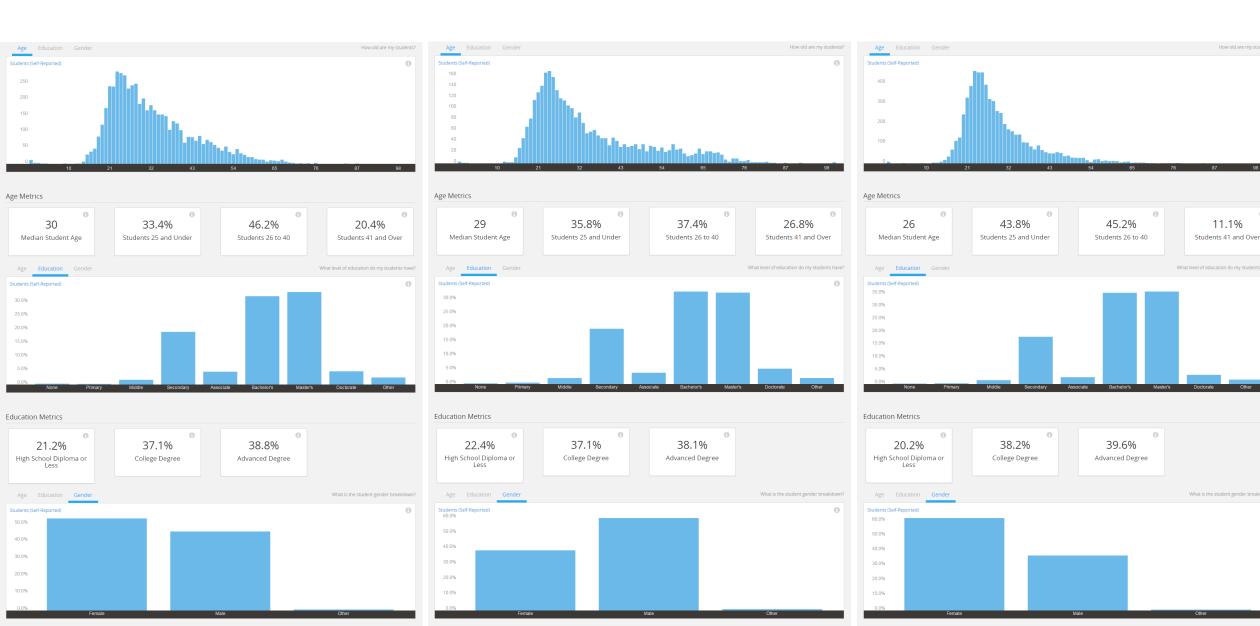
7% of students

# **LIPS**

### **GRAPH**

### **FRAME**

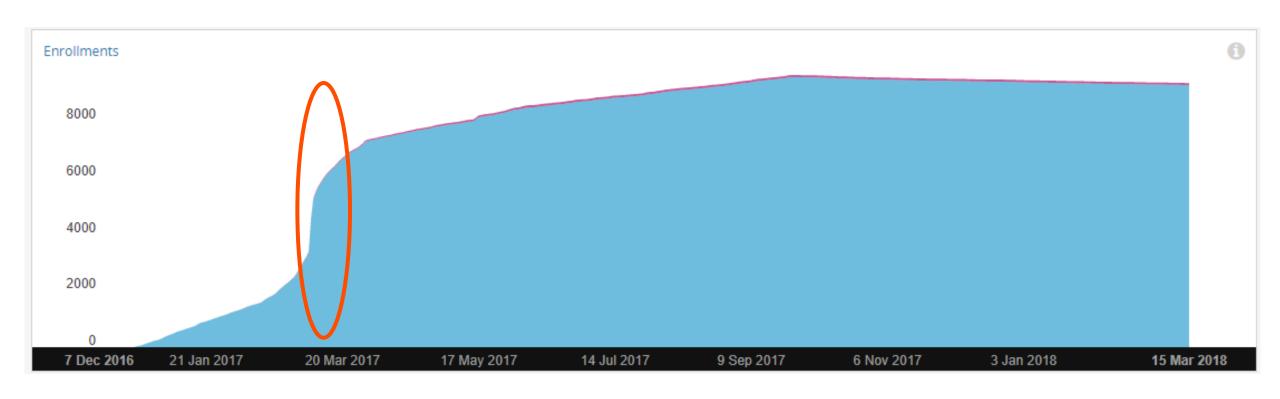
11.1%



### Current numbers (16/03/2018)

- Total enrollments: 108.000 enrollments
- Most popular course:
  - Existential Well-being Counseling: A Person-centered Experiential Approach
    - Run 1: 16,598 enrollments 167 countries
    - Run 2 (current): 11.821 enrollments 167 countries
  - UML Class Diagrams for Software Engineering
    - Run 1: 10.689 enrollments
    - Run 2: 5.157 enrollments
    - Run 3 (current): 1.353 enrollments

# **UML**x





### Current numbers (16/03/2018)

- Smallest MOOC
  - Europeana Space: Creative with Digital Heritage
    - Run 1: 984 enrollments
    - Run 2: 1.580 enrollments



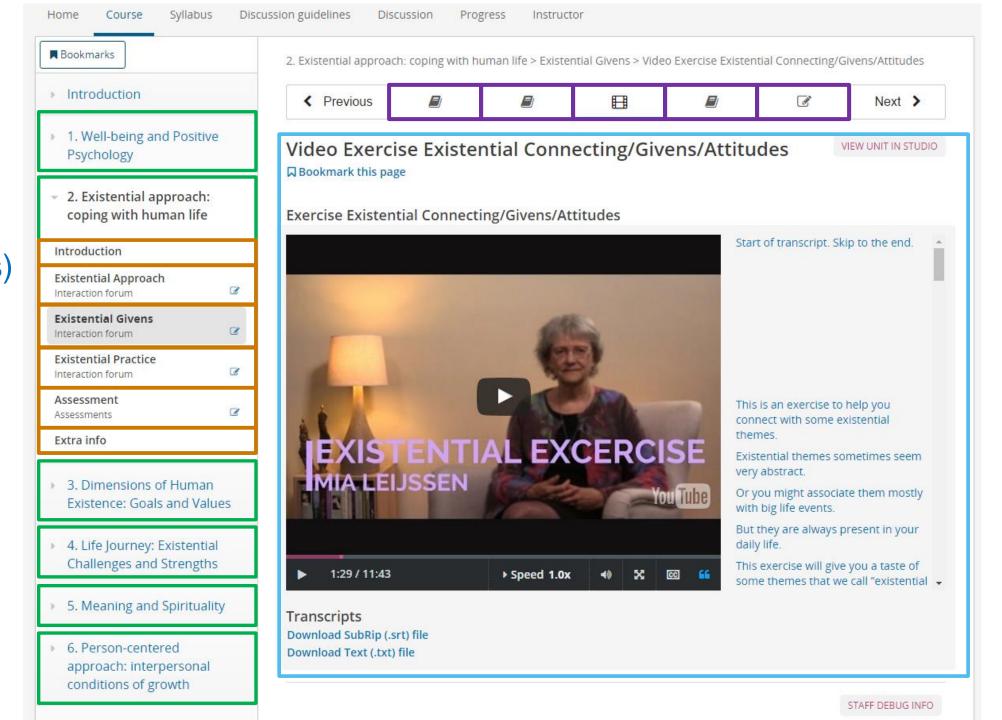
# Platform

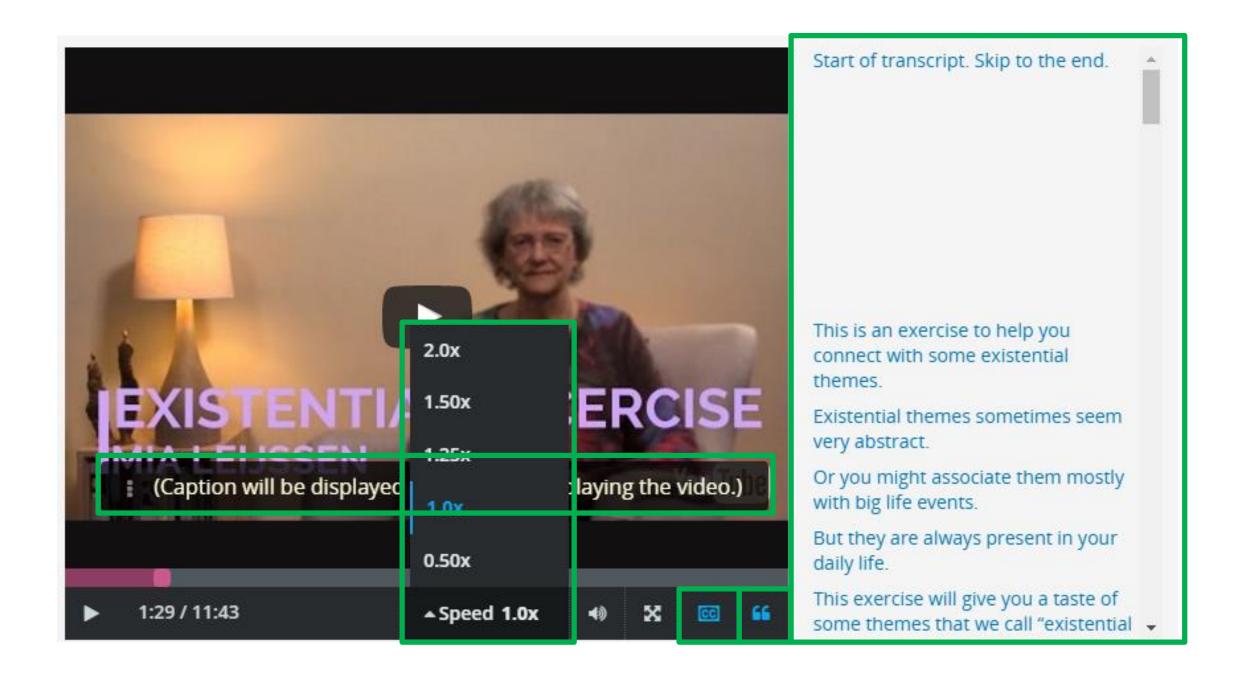
### **Sections**

### Subsections

### **Units**

Component(s)





2. Existential approach: coping with human life > Existential Givens > The Existential Layer of the Life Process

✔ Previous     ■     ■     ■     ■     Next	>
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### The Existential Layer of the Life Process

VIEW UNIT IN STUDIO

☐ Bookmark this page

#### The existential layer of the life process. Siebrecht Vanhooren

In the earlier parts of this section, you might have noticed how the existential approach reveals important themes which speak to all of us, but also touch our deepest and most intimate hopes and fears. As Carl Rogers (1980) noted, our most personal concerns are also the most universal. Paradoxically, our deepest individual preoccupations are shared by the rest of humankind. When clients let us in and speak from their deepest self, we might find something in ourselves trembling and resonating, because we recognize these same ultimate concerns in our own life process. In these moments, the existential layer of what it means to be human expresses itself in what we each experience as a client or as a therapist, and yet deeply share in our therapeutic relationship.

Outside the therapeutic relationship, we become more aware of the existential layer at important life events, such as the birth of a child, the loss of a loved one, and when we have to make important life choices. These moments put us back in touch with the awareness that we are alive. They might remind us that life is short and invite us to reconsider what really matters to us. Every experience of loss and every experience of awe can help us to get back in touch with our meaning in life. Life decisions can confront us with our own responsibility, our freedom to choose, and the anxiety we experience towards the Un-Known.

Although we tend to think of these significant life events when we hear the word existential, the existential layer is also present in the everyday. Every moment in life is in fact existential and every challenge, issue, and possibility has an existential dimension to it. Tuning in to the existential layer of the client's problems and way of being will help us to deepen the therapeutic process. It will enrich our presence; it will provide a deeper understanding of the client and it will clarify new directions for the counseling process.

2. Existential approach: coping with human life > Existential Givens > Existential givens



### **Existential givens**

VIEW UNIT IN STUDIO

☐ Bookmark this page

### Existential givens. Siebrecht Vanhooren

Existential philosophers and psychologists have uncovered several existential givens which are part of the human condition. These ultimate concerns are unavoidable and essentially unsolvable. As life goes on, we weave these universal themes into our own life story. In this paper we briefly introduce the following givens: embodiment, autonomy and relatedness, freedom and responsibility, death and limitations, meaning and meaninglessness, and finally Un-Knowing.

Download the article

2. Existential approach: coping with human life > Assessment > Assessment Previous Ø. Next > VIEW UNIT IN STUDIO Assessment ☐ Bookmark this page Question 1 1.0 point possible (graded) (one correct answer) What is the primary concern of the existential approach? Someone's life story Someone's personal experience of their existence Someone's turning points in life Someone's deepest thoughts and motives Someone's understanding of the meaning of life Submit You have used 0 of 1 attempt Save Show Answer SUBMISSION HISTORY STAFF DEBUG INFO Question 2 1.0 point possible (graded)

Oefening 9.9

4.0/4.0 points (graded)

Gegeven:

$$pK_z(CH_3COOH) = 4,75$$

$$pK_{z1}(H_2SO_3) = 1,90$$

$$pK_{z2}(H_2SO_3) = 7,20$$

Welke van de volgende mengsels is (zijn) geen buffermengsel(s)?

- 1. Een mengsel van  $0,1~M~CH_3COOH$  en 0,05~M~KOH.
- 2. Een mengsel van  $0,05\ M\ H_2SO_3$  en  $0,075\ M\ NaOH$ .
- 3. Een mengsel van  $0,15\ M\ H_2SO_3$  en  $0,15\ M\ K_2SO_3$ .
- A. Mengsel 1 en 2.
- B. Mengsel 3. 

  ✓
- O. Mengsel 2.
- O. Alledrie de mengsels zijn buffermengsels.

#### Uitleg

#### Gegeven:

 $pK_z(CH_3COOH) = 4,75$ 

 $pK_{z1}(H_2SO_3) = 1,90$ 

 $pK_{z2}(H_2SO_3) = 7,20$ 

- 1. Een mengsel van  $0, 1 \ M \ CH_3COOH$  en  $0, 05 \ M \ KOH$ .
- 2. Een mengsel van  $0,05~M~H_2SO_3~$ en 0,075~M~NaOH.
- 3. Een mengsel van  $0,15\ M\ H_2SO_3$  en  $0,15\ M\ K_2SO_3$ .

#### Gevraagd:

Welke van deze mengsels is een buffermengsel?

#### Oplossing

.....

Een bufferoplossing bevat zowel een zwak zuur (zwakke base) als z'n geconjugeerde zwakke base (zwak zuur).

#### 1. Een mengsel van $0,1~M~CH_3COOH$ en 0,05~M~KOH.

Reactie tussen zwak zuur ( $CH_3COOH$ ) en de sterke base (KOH):

	$CH_3COOH$	+	KOH	$\rightarrow$	$CH_3COO^-$	+	$K^+$	+	$H_2O$
Initieel	0, 1 M		0,05 M		/		/		
Reactie	-0,05 M		-0,05 M		+0,05 M		+0,05~M		+0,05 M
Finaal	0,05 M		/		0,05 M		0,05 M		

De oplossing bevat finaal  $0,05\ M\ CH_3COOH$  (zwak zuur) en  $0,05\ M\ CH_3COO^-$  (geconjugeerde zwakke base).

 $\rightarrow$  BUFFER

-, 5011 E10

2. Een mengsel van  $0,05\ M\ H_2SO_3$  en  $0,075\ M\ NaOH$ .

Reactie tussen  $H_2SO_3$  (zwak zuur) en NaOH (sterke base)

	$H_2SO_3$	+	NaOH	$\rightarrow$	$HSO_3^-$	+	$Na^+$	+	$H_2O$
Initieel	0,05 M		0,075~M		/		/		
Reactie	-0,05 M		-0,05 M		+0,05 M		+0,05 M		+0,05 M
Finaal	/		0,025 M		0,05 M		0,05 M		

Reactie tussen  $HSO_3^-$  (zwak zuur) en NaOH (sterke base):

	$HSO_3^-$	+	NaOH	$\rightarrow$	$SO_{3}^{2-}$	+	$Na^+$	+	$H_2O$
Initieel	0,05~M		$0,025\;M$		/		0,05~M		•••
Reactie	$-0,025\;M$		$-0,025\;M$		+0,025~M		+0,025~M		+0,025~M
Finaal	0,025~M		/		0,025~M		0,075~M		

De oplossing bevat finaal  $0,025~M~HSO_3^-$  (zwak zuur) en  $0,025~M~SO_3^{2-}$  (geconjugeerde zwakke base).

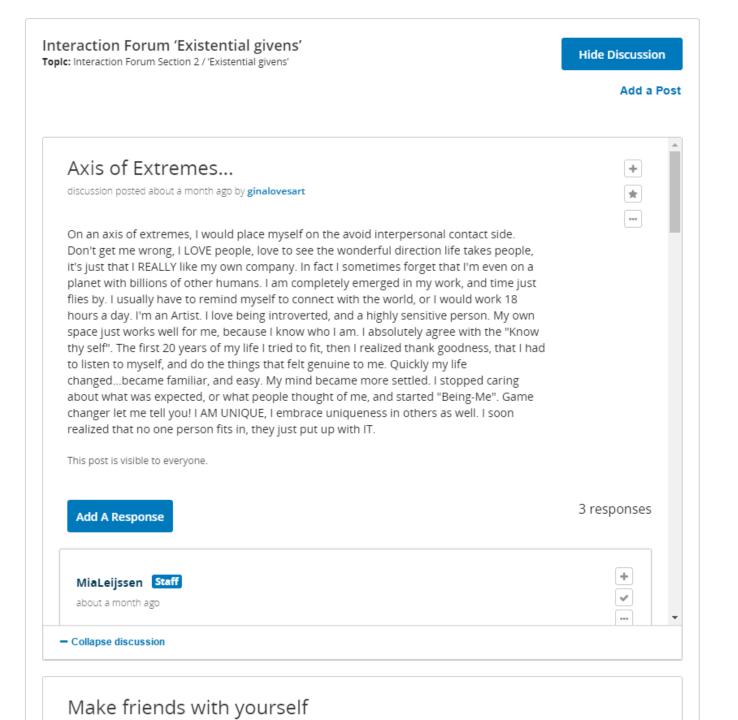
→ BUFFER

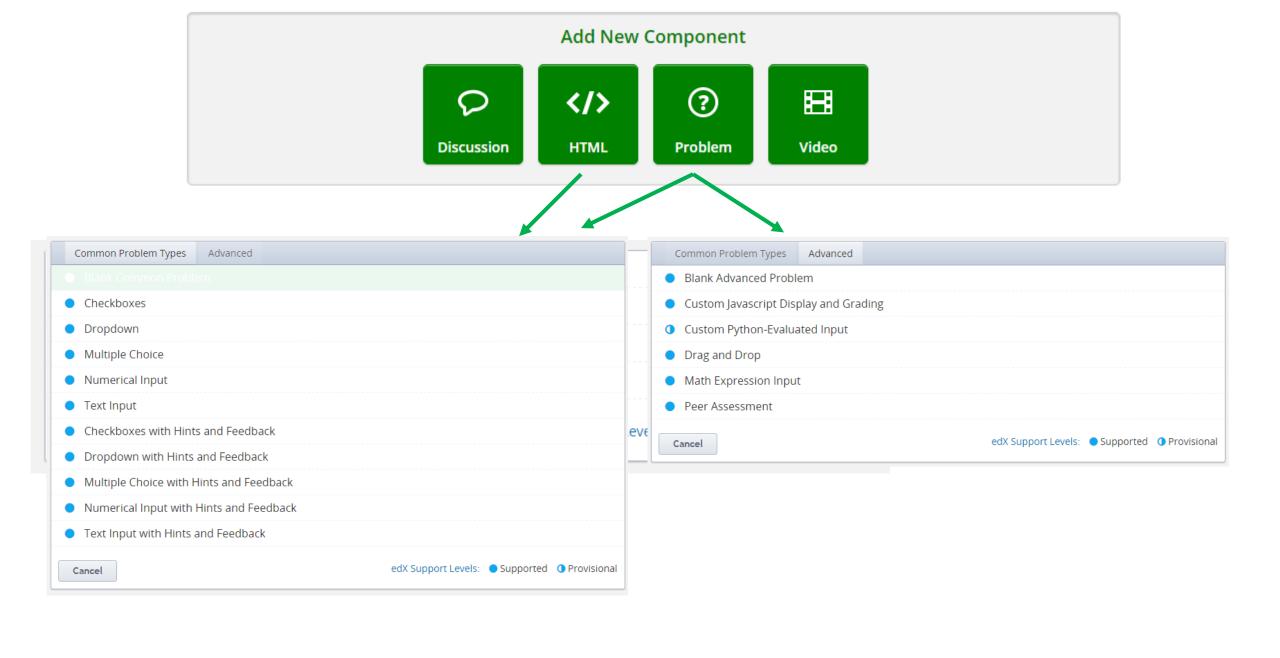
#### 3. Een mengsel van $0,15\ M\ H_2SO_3$ en $0,15\ M\ K_2SO_3$ .

Dit mengesel bevat  $0,15~M~H_2SO_3$  (zwak zuur) en  $0,15~M~K_2SO_3$  (een zwakke base maar niet de geconjugeerde vorm van  $H_2SO_3$ ).

→ GEEN BUFFER

Besluit: Antwoord B is JUIST.

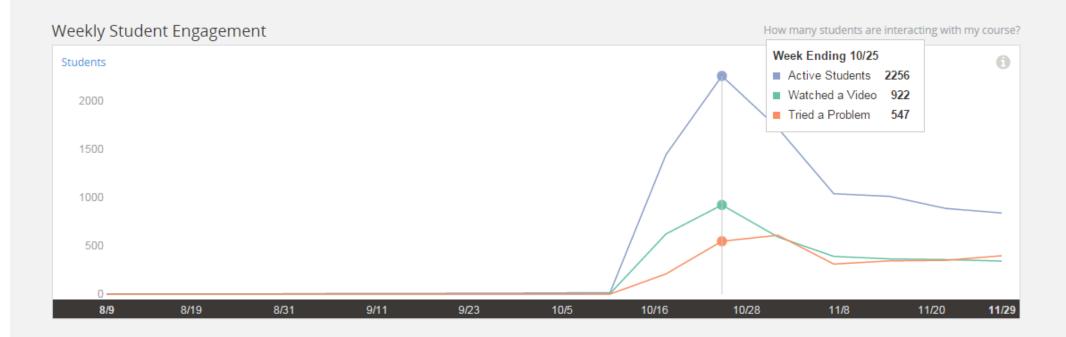






# Analytics





### Student Activity Metrics

839
Active Students Last Week
11.7% of current students

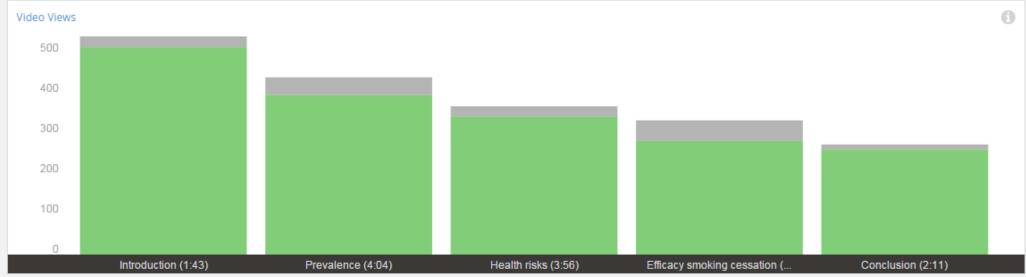
342
Watched a Video Last
Week
4.8% of current students

397
Tried a Problem Last
Week
5.5% of current students

Content Engagement Breakdown

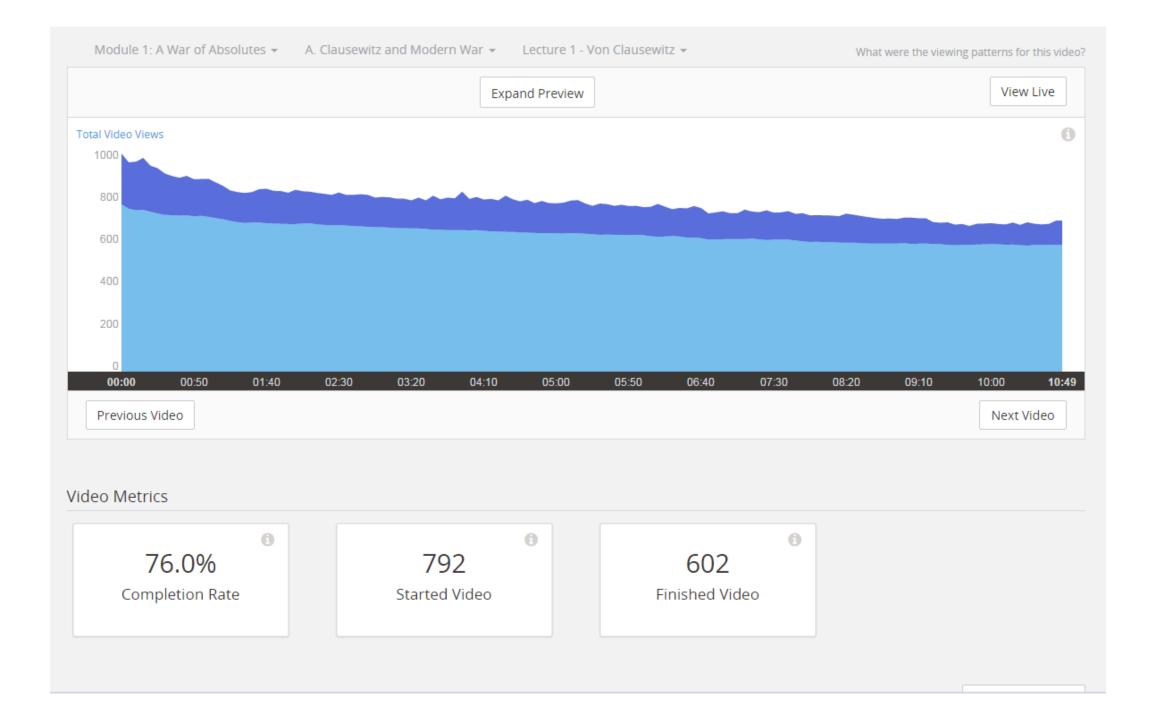
**≛** Download CSV

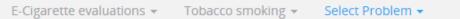




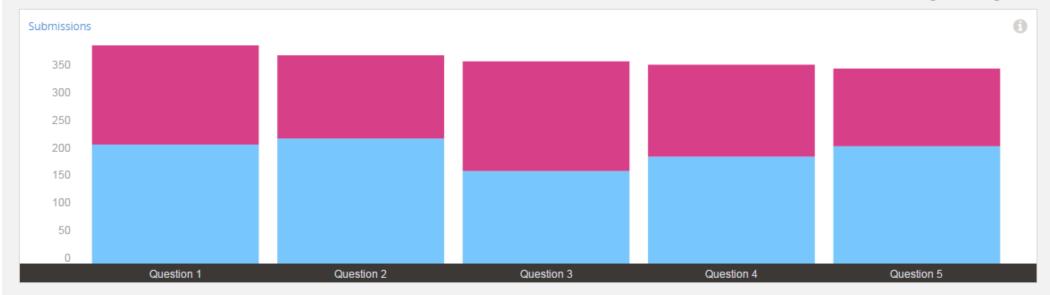
#### Video Views

Order * Video Name \$		Complete Views	ncomplete Views ‡	Completion Percentage 4
1 Introduction (1:43)		516	27	95.0%
2 Prevalence (4:04)		397	44	90.0%
3 Health risks (3:56)		344	25	93.2%
4 Efficacy smoking ces	sation (8:04)	283	51	84.79
5 Conclusion (2:11)		262	12	95.6%
ow 10 ▼ entries				Previous 1 Next >





How are students doing on this assignment?



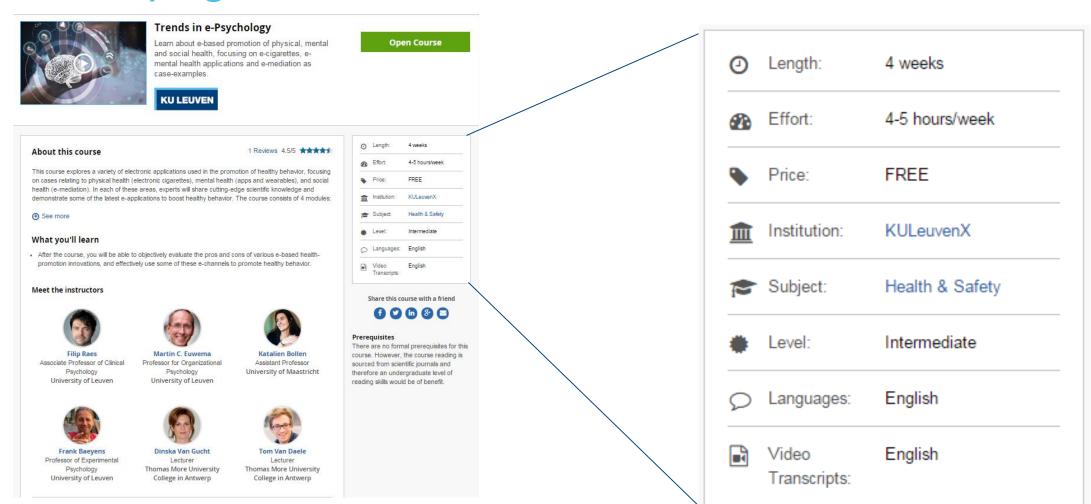
#### Problem Submissions

Order 📤	Problem Name \$	Correct \$	Incorrect \$	Total	Percentage Correct \$
1	Question 1	216	180	396	54.5%
2	Question 2	227	151	378	60.1%
3	Question 3	168	199	367	45.8%
4	Question 4	194	167	361	53.7%
5	Question 5	213	141	354	60.2%
now 10 ▼ en	tries				< Previous 1 Next >



# Announcing a MOOC

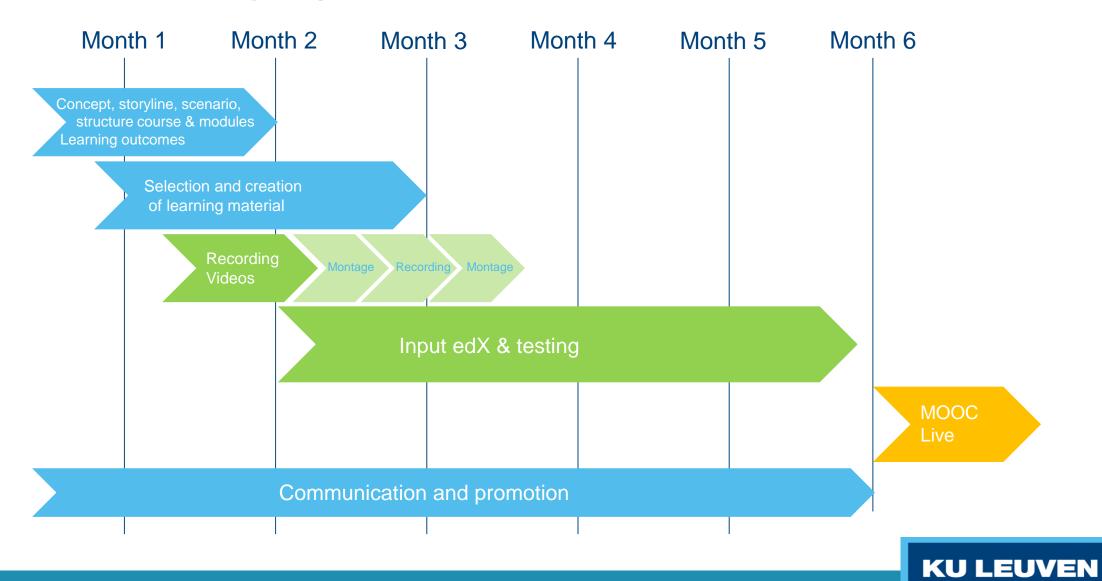
### About page

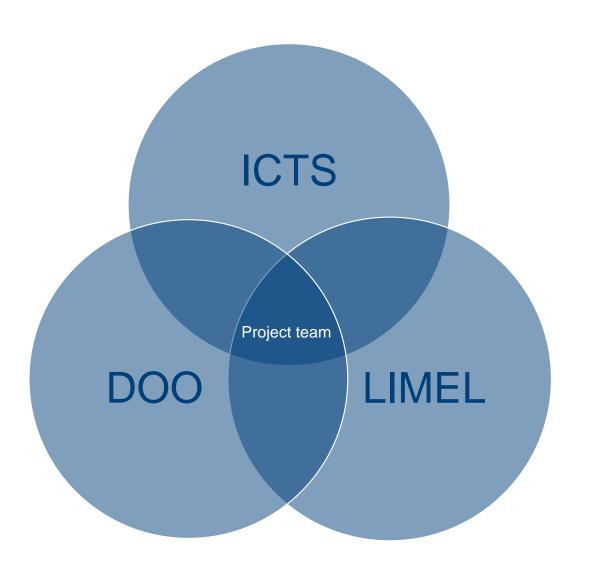




# Support and projectmanagement

## MOOC project





### Meer info?

- http://www.kuleuven.be/MOOC
- https://www.edx.org/school/kuleuvenx
- https://edge.edx.org/courses/KULeuven/DL-test-1/2015\_Q4/about
- <u>x moocs@kuleuven.be</u>



KULeuvenX FWBCx

Existential Well-being

Counseling: A Person-centered

Experiential Approach

Upcoming

Starts: October 1, 2016 - Self-Paced



Europeana Space: Creative with Digital Heritage

Starting Soon
Starts: October 10, 2016 - Self-Paced



ePSYx

Trends in e-Psychology

Upcoming

Starts: November 15, 2016



KULeuvenX

Data Analytics in Health – From Basics to Business

Starting Soon

Starts: November 3, 2016