

# Reinventing Education

Dr Justin Pringle

# Outline

- When was the last *Major* change in education?
- What is our response to massification?
- Where do we need help?
- How can we succeed?

# ...but first a disclaimer...

- I am an engineer/fluid dynamicist.
- My students are engineers.
- My teaching experience is limited.
- This is where creativity lies...

# A Little Introduction...



# How has education changed?

Then



# How has education changed?

Now

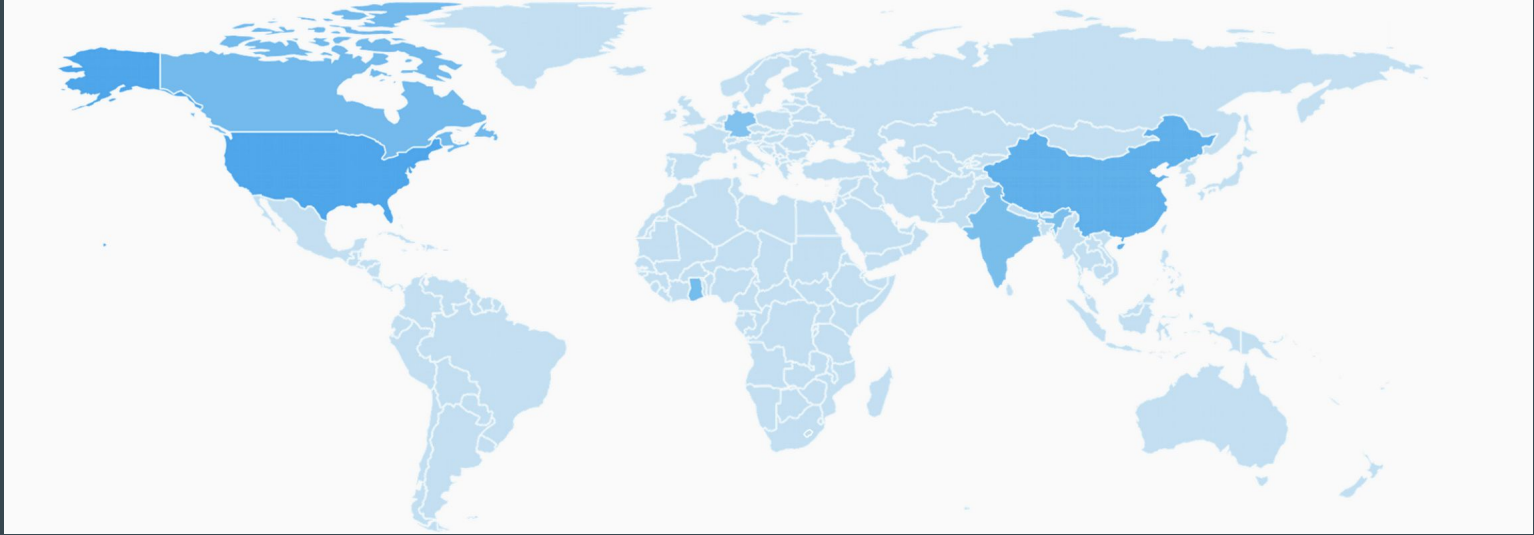


# Our Response to Massification?

- Resource demand.
  - Can we simply make bigger venues?
- Teaching time and quality
- Marking...
- Staff numbers...

# Introducing the MOOC

Massive Open Online Course - 2012/2013





# MOOC at small scale

Can we apply MOOCs at small scale?


# MOOC at small scale

Can we apply MOOCs at small scale?

Yes we can thanks to MIT and Harvard



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香港理工大學

 **THE UNIVERSITY OF BRITISH COLUMBIA** ▸

### Popular Subjects

 **Computer Science**

 **Language**

 **Data Science**

 **Business & Management**

 **Engineering**

 **Humanities**

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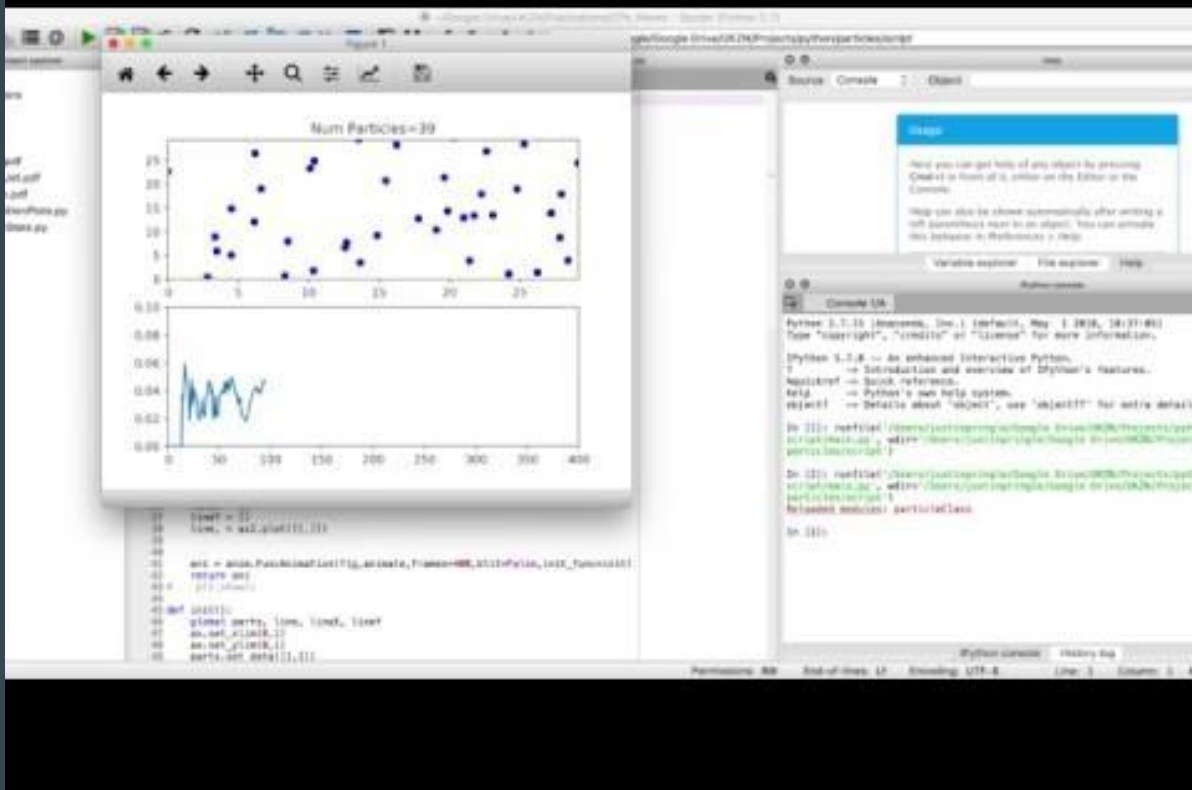
       
 

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- Open Source
- Tried and Tested
- Not a Course “vomit” -> Specifically designed to reinvent education
- Entire online course designed around student
- Active Learning

edX




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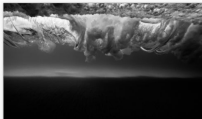
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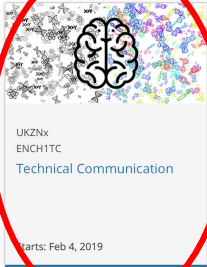
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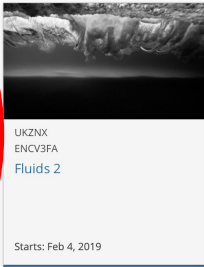
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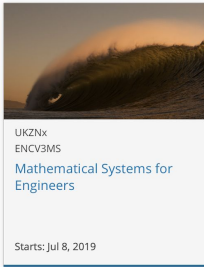
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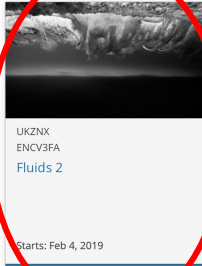
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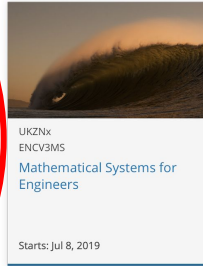
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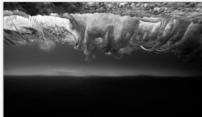
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# Help?

Redefine the “course team”

# Help?

Redefine the “course team”

edX Engineering Team



# Success?

To Begin...

To communicate...

To teach...

To Learn...



# Empowering staff & students to be content creators

Elne van Niekerk

NWU

12 February 2019

# Blended learning

*Multi-modal delivery* Online courses

Community of Inquiry

**Flipped learning** Online learning

Multimedia *Social Presence*

# Vanderbijlpark









# Studio 1 - 2016

<b>2016</b>	<b>Videos recorded</b>	<b>Average size of videos recorded (MB)</b>	<b>Average time recorded (h:min:sec)</b>	<b>Button presses</b>
<b>March</b>	37	314.24	00:06:01	74
<b>April</b>	312	21.64	00:00:45	624
<b>May</b>	751	53.34	00:01:52	1502
<b>June</b>	167	70.05	00:02:27	334
<b>July</b>	680	43.7	00:01:32	1360
<b>August</b>	1037	37.95	00:01:20	2074
<b>September</b>	928	50.52	00:01:47	1856
<b>October</b>	471	99.17	00:03:30	942
<b>November</b>	103	71.31	00:02:30	206
<b>Total for 2016:</b>	<b>4486</b>	<b>84.66</b>	<b>00:02:25</b>	<b>8972</b>

# Studio 1&2 - 2017

2017	Videos recorded	Average size of videos recorded (MB)	Average time recorded (h:min:sec)	Button presses
<sup>3</sup> January	30	256.25	00:04:12	60
<sup>1,3</sup> February	752	353.19	00:01:20	1504
March	1192	57.415	00:01:49	2384
April	1426	81.17	00:02:39	2852
<sup>1</sup> May	2953	43.6	00:01:54	5906
<sup>1</sup> June	779	35.47	00:01:54	1558
July	522	48.37	00:01:26	1044
August	1540	34.93	00:01:15	3080
September	1707	48.49	00:01:41	3414
October	1783	45.8	00:01:37	3566
November	236	48.695	00:01:42	472
December	0	0	0	0
<b>Total for 2017:</b>	<b>14068</b>	<b>91.54455</b>	<b>00:01:41</b>	<b>28136</b>

# Studio 1&2 - 2018

	VIDEOS RECORDED	AVERAGE SIZE OF VIDEOS RECORDED (MB)	AVERAGE TIME RECORDED P/VIDEO	NUMBER OF BUTTON PRESSES
JAN	83	71,51	00:02:37	166
FEB	934	113,72	00:04:06	1868
MAR	2915	80,74	00:01:56	5830
APR	1705	99,04	00:02:37	3410
MAY	1676	325,68	00:06:55	3352
JUN	277	184,37	00:07:01	554
JUL	322	147,05	00:05:37	644
AUG	1547	101,12	00:03:51	3094
SEP	2045	85,92	00:03:16	4090
OCT	1942	70,32	00:02:44	3884
NOV	235	84,54	00:03:21	470
DEC				
<b>TOTAL FOR 2018</b>	<b>13681</b>	<b>1364,01</b>	<b>00:04:01</b>	<b>27174</b>



**INTERVIEW  
SETTING**



**MODULE  
INTRODUCTIONS**



**PRESENTATION  
PRACTICE**



**MODULE  
ASSIGNMENTS**

# Lessons learned and still learning

- Collaboration
- Responsibility
- Extent of support