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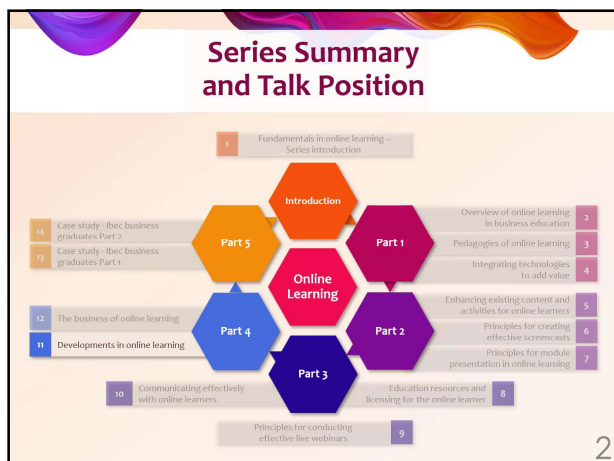
Developments in Online Learning



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Overview

What do we mean by 'trend' in online learning?

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Overview

- Thirty of The Most Popular Trends in Education
- Top Education Trends That Look Promising for 2019
- eLearning Trends and Predictions for 2018
- The Future of Technology in Higher Education

Overview

- What do we mean by ‘trend’ in online learning?
- What is driving online learning?
- Emerging trends

Where to Find Key Trends

Gartner

Hype Cycle for Education, 2019

Robert Yancckello, Kelly Calhoun Williams, 29 July 2019

"A new era of innovation is emerging for education CIOs, focused on enhancing enterprise business capabilities throughout the institution or school. This Hype Cycle identifies the impact of these new opportunities on educational outcomes, the student experience and business model transformation."

2020 EDUCAUSE Horizon Report™ Teaching and Learning Edition

Emerging Technologies & Practices and Influential Trends, 2020



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What is a 'Trend'?

'Trends' vs. 'Predictions'	
<ul style="list-style-type: none">■ A general direction in which something is developing or changing■ Fashion■ A topic that is the subject of many posts on a social media website within a short period of time	<ul style="list-style-type: none">■ To predict: to say or estimate that (a specified thing) will happen in the future or will be a consequence of something

Just because something is popular, that doesn't mean it's effective

Source: Oxforddictionaries.com

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Drivers of Online Learning



Globalisation, Marketisation, and the Knowledge Economy

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Globalisation, Marketisation and the Knowledge Economy



1990

Driven by unprecedented technological advances

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Globalisation, Marketisation and the Knowledge Economy



Ideas



Technology

Fundamental drivers of economic growth

Globalisation, Marketisation and the Knowledge Economy



Ideas



Technology



Knowledge workers

Globalisation, Marketisation and the Knowledge Economy



Web & Social media

-  Vast noise of information
-  'Digital literacies'
-  Innovation knowledge creation



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Globalisation, Marketisation and the Knowledge Economy







Traditional methods
No longer appropriate



Active learner-centred models


Drivers of Online Learning



Massification and Commercialisation of HE

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Massification and Commercialisation of HE



Increased pressure on institutions to expand student numbers

- Widespread massification
- Commercial market-led organisations
- Reach new student 'markets'
- Flexible modes of delivery

- Revenue-generator
- Cost-effective
- Unique selling point

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Focus on Student Experience and Learner-centred Pedagogy




A greater focus on the quality of education

- Shifts in educational theory
- Student-centred
- Flexible, enhanced access
- Collaborative opportunities
- Immersive environments
- Communities of practice

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Drivers of Online Learning



Pressure to cater for a changing student demographic

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Pressure to Cater for Changing Student Demographic



Digital natives Net gen Millennials Gen Z


- Participatory learning environments
- Oriented to visual media
- Learn-by-doing
- Chunked content
- Effective multi-taskers
- Highly networked

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Pressure to Cater for Changing Student Demographic



- Inability to cater for social & intellectual needs
- Failure to harness & capitalise on student's literacy practises
- Many lecturers feel uncomfortable using digital technologies

Pressure to Cater for Changing Student Demographic



Some have called for radical changes

Drivers of Online Learning



Technologies have impacted society and are having a significant impact on education



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Open Education

Curation

Digital Badging

Next Generation

Adaptive Learning

Personalisation

Artificial Intelligence

Virtual Reality

Learning

Mobile Learning

Internet of Things

Micro-credentials

Learning Analytics

Big Data

Open Education

Augmented Reality

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Open Education

Resurgence of interest in open learning and education

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Open Education

“Sharing is probably the most basic characteristic of education: education is sharing knowledge, insights and information with others, upon which new knowledge, skills, ideas and understanding can be built”

Open Education Consortium



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Open Providers

Open courses/
MOOCs

OERs

Open
Research

Open Data

Open Source
Tools

Khan Academy

Provides access to a range of courses, activities & subjects
2017 report indicates they had more than **sixty million** registered users

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Open Providers

Open courses/
MOOCs

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coursera

One of the largest MOOCs with **37 million** registered users in 2018
Over **2,700** active courses

Open Providers

Open courses/
MOOCs

OERs

Open
Research

Open Data

Open Source
Tools

Presentation slides
Recorded lectures
Podcasts
Images
Worksheets
Other activities

Creative common licenses allow
others to access, reuse & modify
for educational purposes



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Open Providers

Open courses/
MOOCs

OERs

Open
Research

Open Data

Open Source
Tools

Research outputs freely available online
Underlying research data, methodologies etc.
Open to anyone to use, reuse, redistribute

Open Providers

Open courses/
MOOCs


OERs

Open
Research

Open Data

Open Source
Tools

Programmes with source codes that are openly published for use
History of not-for-profit collaboration on the design & development
of the product



Challenges of Open Education




Ensuring quality

Knowing how to evaluate online materials and assess their
accuracy, reliability and overall quality
Process takes time, well developed critical and evaluative skills



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Challenges of Open Education



Infrastructure limitations

Lack of equal access to technologies
Particular issue in developing countries where access to technologies and the internet may be difficult

Challenges of Open Education



Sustainability

Many OER initiatives have closed since their funding mechanisms ended
The most sustainable models are funded as international, multi-stakeholder, non-profit organisations

Challenges of Open Education



Awareness of OERs & copyright issues

A significant proportion of academics have a limited awareness of open educational resources
Many authors prefer to retain the copyright of their work



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Learning Analytics

“The measurement, collection, analysis and reporting of data about learners and their contexts, for purposes of understanding and optimizing learning and the environments in which it occurs”

- 1st International Conference on Learning Analytics and Knowledge (2011)

Use of analytics in HE has grown in recent years:

1. A substantial increase in data quantity
2. Improve data formats
3. Advances in computing
4. Increased sophistication of tools available in analytics

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What can Learning Data be Used for?

Enhance student success and boost retention

- Learning data is used to develop a picture of student engagement with a course
- Argued it can enable self-directed learning

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What can Learning Data be Used for?

Enhance student success and boost retention

Personalise adaptive curricula & support

- Students are directed to learning materials and activities based on previous interactions



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What can Learning Data be Used for?

- Enhance student success and boost retention
- Personalise adaptive curricula & support
- Inform programme/instructional design
 - Lecturers gain insight into student engagement with online materials or activities

What can Learning Data be Used for?

- Enhance student success and boost retention
- Personalise adaptive curricula & support
- Inform programme/instructional design
- Support QA and quality enhancement
 - Program level analytics can be used to get an insight into the most effective strategies

What can Learning Data be Used for?

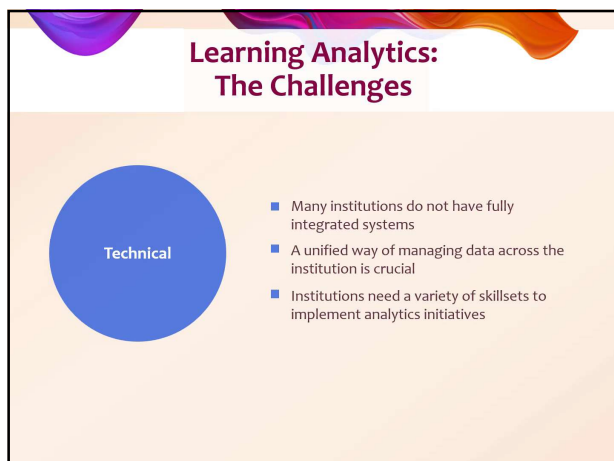
- Enhance student success and boost retention
- Personalise adaptive curricula & support
- Inform programme/instructional design
- Support QA and quality enhancement
- Enable institutional resource planning
 - Insights can be used to develop on appropriate support mechanisms



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Learning Analytics: The Challenges

Legal/Ethical

- Institutions must comply with the relevant data protection legislation
- Clear institutional policies are essential
- There is a potential for the misuse of data
- Crucial that institutions and educators understand their responsibilities

Adaptive Learning

A technique that provides personalised learning

- Aims to provide students with customised, personalised, non-linear pathways
- Data driven approach
- Goal is to bring students through a learning path which is tailored to their needs

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How does Adaptive Learning Work?

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graph TD
    A[Content design  
Embedded learning activities  
Adaptive assessments] --> B[Student Data]
    B --> C[Data analysis]
    C --> D[Student]
    C --> E[Educator]
    D <--> E
    D --> A
    E --> A
    
```

Epelboin, MOOC and Pedagogy (2015)

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Adaptive Learning: The Challenges

- 1 Lack of research underpinning adaptive learning
- 2 Resourcing
- 3 Winning over instructors and students
- 4 Selecting the right provider
- 5 Dealing with large data sets
- 6 Understanding limitations

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Freda, Clearing the hurdles to adaptive learning (2016)

What have we Learned?

- Various forces and drivers caused an expansion in online learning in HE
- Key trends also present challenges
- How will institutions and current systems respond to these challenges?

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Thank you!

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References

Creative Commons
<https://creativecommons.org/> Accessed 21.05.20

Banff. 1st International Conference on Learning Analytics and Knowledge, Feb–Mar 2011; as cited in George Siemens, G. et al. Penetrating the Fog: Analytics in Learning and Education EDUCAUSE Review, Sept-Oct 2011; 46 (5)

Freda. *Clearing the hurdles to adaptive learning: Overcoming six challenges encountered in adopting adaptive learning*, Aug 2016.
<https://universitybusiness.com/clearing-the-hurdles-to-adaptive-learning/>
Accessed 21.05.20

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References

Open Education Consortium
<https://www.oecconsortium.org/> Accessed 21.05.20

Pandey. eLearning Trends and predictions for 2018, Jan 2018;
<https://elearningindustry.com/elearning-trends-and-predictions-for-2018>
Accessed 21.05.20

Epelboin. MOOC and Pedagogy: Where are we heading? EUNIS Journal of Higher Education 3, 2015;
<http://tinyurl.com/y2gcmr5d>
Accessed 21.05.20

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