

A Systematic Review of MOOC Research Methods and Topics: Comparing 2014-2016 and 2016-2017

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Soo, K. S., & Bonk, C. J. (1998, June 20-25). *Interaction: What does it mean in online distance education*. Paper (NOT/NEVER) presented at Ed-Media & Ed-Telecom 98, Freiburg, Germany. (ERIC Document Reproduction Service No ED 428724). Available: <https://files.eric.ed.gov/fulltext/ED428724.pdf>
Beatles Audio (6 secs): <http://curtbonk.com/20-years-medium-audio.html>
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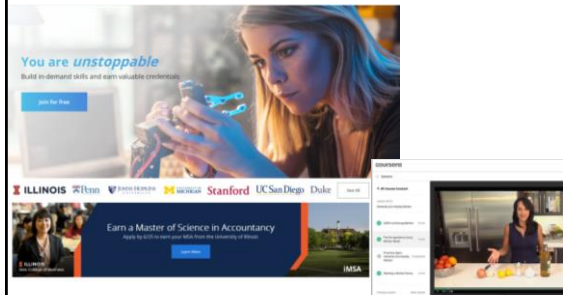
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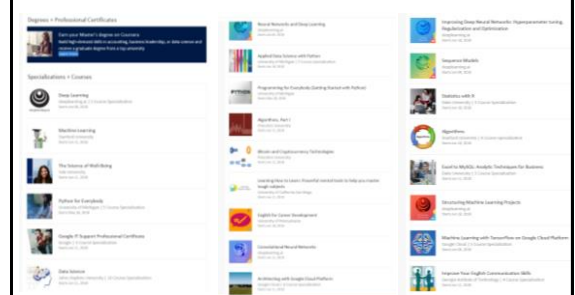
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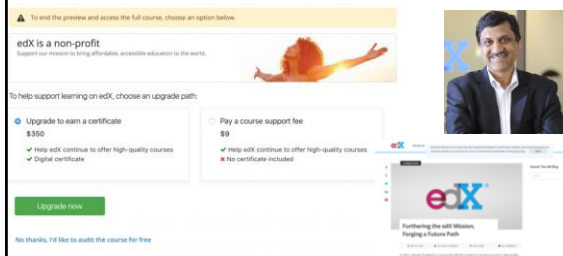
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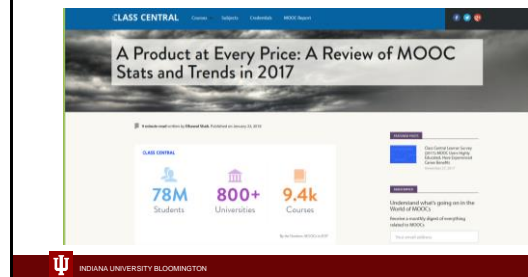
Free MOOCs Face the Music Lindsay McKenzie, Inside Higher Ed

<https://www.insidehighered.com/news/2018/06/14/edx-introduces-support-fee-free-online-courses>



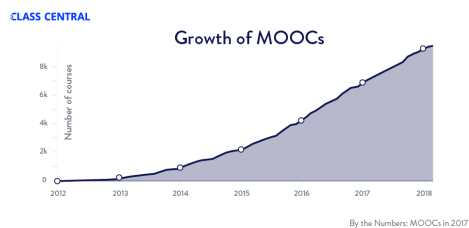
December 25, 2016 vs. January 22, 2018 A Review of MOOCs Stats and Trends in 2017, Dhawal Shah, Class Central

<https://www.class-central.com/report/moocs-stats-and-trends-2017/>



January 22, 2018 A Review of MOOCs Stats and Trends in 2017, Dhawal Shah, Class Central

<https://www.class-central.com/report/moocs-stats-and-trends-2017/>

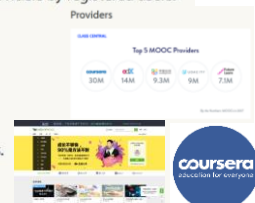


January 22, 2018 A Review of MOOCs Stats and Trends in 2017, Dhawal Shah, Class Central

<https://www.class-central.com/report/moocs-stats-and-trends-2017/>

Here is a list of the top five MOOC providers by registered users:

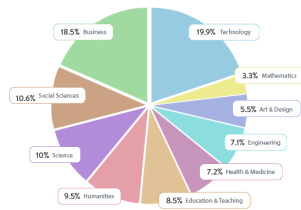
1. Coursera — 30 million users.
2. edX — 14 million users.
3. XuetangX — 9.3 million users.
4. FutureLearn — 7.1 million users.
5. Udacity — 5 million users.



Subject areas (January 22, 2018)

CLASS CENTRAL

Course Distribution by Subject



By the Numbers: MOOCs in 2017

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June 15, 2017

Massive List of MOOC Providers Around The World, Class Central

JMOOC, K-MOOC, and T-MOOC?

<https://www.class-central.com/report/mooc-providers-list/>



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August 17, 2017

By the Numbers: MOOCs in 2016 Class Central, Dhawal Shah

<https://www.class-central.com/report/mooc-in-2016/>

Providers

With 1700+ active courses, Coursera is still the largest MOOC provider even after discontinuing *hundreds of courses*.

EdX is not far behind with 1300 courses, followed by FutureLearn with 480 courses.

After this there is Latin American MOOC provider Miriada X with 350 courses in Spanish followed by XuetangX with 300+ courses in Chinese.

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September 2016

MOOCs, Graduate Skills Gaps, and Employability: A Qualitative Systematic Review of the Literature

David Santandreu Calonge and Mariam Aman Shah, IRRODL, 17(5), 67-90.

<http://www.irrodl.org/index.php/irrodl/article/view/2675/3881>

"MOOCs have had a significant role in helping the traditional and the "new traditional" graduates to quickly up-skill before employment or to quickly "come on board" in their new job. MOOCs have provided flexible, on-demand, collaborative, and just-in-time learning opportunities through which to obtain relevant and applicable skills." (p. 78)

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August 7, 2017

FutureLearn and Coventry University to Roll Out 50 Online Degrees (Last year Deakin University announced a similar partnership with FutureLearn) Class Central, Dhawal Shah

<https://www.class-central.com/report/futurelearn-coventry-university-roll-50-online-degrees/>

Degree	Provider	University	Cost
MS Computer Science	Udacity	Georgia Tech	\$6,600
MS Analytics	edX	Georgia Tech	\$10k
MBA	Coursera	University of Illinois	\$22k
MS CS Data Science	Coursera	University of Illinois	\$19.2k
MS Accounting	Coursera	University of Illinois	\$27.2k
Masters in Innovation and Entrepreneurship	Coursera	HEC Paris	€20k
Cyber Security (Masters)	FutureLearn	Deakin University	£24k
Development and Humanitarian Action (Masters)	FutureLearn	Deakin University	£24k
Professional Practice: Information Technology (Masters)	FutureLearn	Deakin University	£24k

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August 7, 2017

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Class Central, Dhawal Shah



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David Santandreu Calonge and Mariam Aman Shah, *IRRODL*, 17(5), 67-90.
<http://www.irrodl.com/irrodl/article/view/377/194>

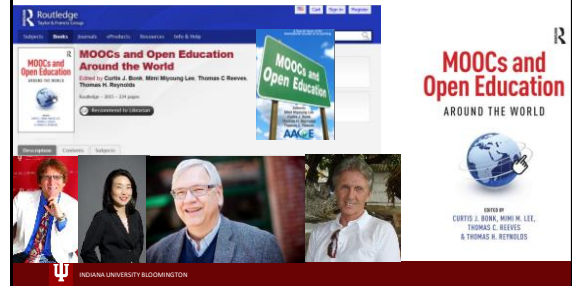
"In 2013, research had already indicated that MOOCs offered unprecedented choice, customization and gave thousands of participants the possibility to have greater ownership and control over their learning experiences "rather than being constrained by centralized, instructor-controlled learning based on delivery of pre-fabricated curriculum" (McLoughlin, 2013). (p. 78.)

19



MOOCs and Open Education Around the World (2015)

<http://moocsbook.com/>



2015

Instructional quality of Massive Open Online Courses (MOOCs).

Margaryan, Bianco, & Littlejohn, *Computers & Education*, 80, 77-83.
<http://www.sciencedirect.com/science/article/pii/S0306985915001785>

"As MOOCs proliferate, drawing in increasing numbers of faculty and learners worldwide, the issue of their instructional quality becomes increasingly pressing." (p. 82)



November 2014

Where is Research on Massive Open Online Courses Headed? A Data Analysis of the MOOC Research Initiative

Dragan Gasevic and colleagues (including George Siemens), *IRRODL*.
<http://www.irrodl.com/irrodl/article/view/358/158>

Table 1	Keywords representing data used for studies within the cluster	Keywords representing outcomes used for studies within the cluster	Keywords representing outcomes used for studies within the cluster
Concept Categories for Describing Clusters			
Concepts	Examples	Analysis	Keywords representing outcomes used for studies within the cluster
Topics	The most frequent keywords that describe topics contained in the specific cluster	Keywords representing outcomes used for studies within the cluster	Keywords representing outcomes used for studies within the cluster
Themes/Approach	Keywords that describe specific themes/approach within the cluster	Keywords representing outcomes used for studies within the cluster	Keywords representing outcomes used for studies within the cluster
Environment	Keywords that describe the environment within the cluster	Keywords representing outcomes used for studies within the cluster	Keywords representing outcomes used for studies within the cluster
Domains	Keywords that represent a specific domain of a MOOC cluster	Keywords representing outcomes used for studies within the cluster	Keywords representing outcomes used for studies within the cluster



Dragan Gasevic¹, Viktor Kuznetsov², Sandra Schickel³ and George Siemens⁴
¹University of Toronto, Canada, ²Simon Fraser University, Canada, ³University of Toronto at Scarborough, Canada

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Table 1 Phase 1 Distribution of Research Methodologies				Table 2 Phase 2 Distribution of Research Methodologies			
Table 1 Phase 1 Distribution of Research Methodologies				Table 2 Phase 2 Distribution of Research Methodologies			
Methodology	Subdomains	Authors arg. (SD)	Citations arg. (SD)	Methodology	Subdomains	Authors arg. (SD)	Citations arg. (SD)
Mixed	98 (26.2%)	2.4 (1.3)	8.2 (5.0)	Mixed	22 (24.4%)	2.7 (1.5)	7.3 (5.2)
Qualitative	74 (20.3%)	2.1 (1.1)	8.9 (5.4)	Qualitative	19 (24.4%)	2.4 (1.4)	8.8 (4.8)
Quantitative	86 (23.2%)	2.4 (1.3)	6.6 (4.8)	Quantitative	46 (52.2%)	2.4 (1.4)	6.7 (4.6)
Others	11 (3.0%)	1.7 (0.8)	7.1 (5.0)	Total	78(88.0%)	2.5 (1.5)	7.5 (5.3)
Total	139 (36.7%)	2.3 (1.2)	7.7 (5.1)				



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<http://www.irrodl.com/irrodl/article/view/358/158>

Table 6	Phase 1 Top 5 Research Fields
Field	Authors
Education	251
Industry	58
Computer Science	58
Social Sciences	32
Engineering	30

Continent	Authors	Authoried proposals	Accepted proposals
Africa	4	3	0
Asia	87	34.38	3.67
Australia/NZ	23	10.33	6
Europe	137	60.51	15.83
North America	305	153.26	54.5
South America	9	4.5	1



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November 2014

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Dragan Gasevic and colleagues (including George Siemens), IRRODL

<http://www.irrodl.org/index.php/irrodl/article/view/1254>

Table 14

Phase 2 Top 5 Research Fields

Field	Authors
Education	106
Computer Science	21
Engineering	13
Industry	8
Social Sciences	6

Table 15

Phase 2 Geographic Distribution of the Authors

Continent	Authors	Authoring proposals	Accepted proposals
Asia	17	4-64	0-14
Australia/NZ	11	4-25	1
Europe	40	15-66	4
North America	127	50-44	22-85
South America	9	1	0



George Siemens, "What's Next?" (2014), Creative Commons BY-NC-SA, and George Siemens



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June 2015

Who Studies MOOCs? Interdisciplinarity in MOOC Research and its Changes over Time, IRRODL

George Veletsianos and Peter Shepherdson

<http://www.irrodl.org/index.php/irrodl/article/view/2248/2248>

Table 1

Discipline	Number of Authors	Number of Publications	Number of Citations
Education	106	106	106
Computer Science	21	21	21
Engineering	13	13	13
Industry	8	8	8
Social Sciences	6	6	6
Other	1	1	1



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February 2016

A Systematic Analysis and Synthesis of the Empirical MOOC Literature Published in 2013-2015, IRRODL

George Veletsianos and Peter Shepherdson

<http://www.irrodl.org/index.php/irrodl/article/view/2448/2448>

Table 6

Frequency (Percentage) of Data Analysis Methods Used

Analytic Method	Frequency (%) of Total Papers
Descriptive statistics	93.4
Correlational	52.5
Basic qualitative study	38.8
Experimental and quasi-experimental	25.7
Grounded theory	7.6
Natural language processing	7.6
Social Network Analysis	6.6
Ethnography	4.4
Phenomenology	3.2
Discourse analysis	1.0

RQ5: What are the research strands of empirical MOOC research?



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George Veletsianos and Peter Shepherdson

<http://www.irrodl.org/index.php/irrodl/article/view/2448/2448>

Table 1

Data Collection Methods, Results, and Dates

Method	# Identified	Date
Search: Scopus	81	7 January 2015
Search: Journal of Online Learning and Teaching	7	11 January 2015
Search: Summon	10	11 January 2015
Search: Google Scholar	11	11 January 2015
Search: ERIH Digital Library	5	11 January 2015
Search: EdHouse Library	4	13 January 2015
Forward Referencing search	60	15-18 January 2015
Reference list check	5	1 February, 2015



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<http://www.irrodl.org/index.php/irrodl/article/view/2448/2448>

RQ5: What are the research strands of empirical MOOC research?

We identified five categories describing the research reported in the corpus: student-focused; design-focused; context and impact; instructor-focused; and other (Table 7).

Table 7

Research Strands Present in the Empirical MOOC Literature and Associated Frequency (Percentage) of Each Strand (as a Percentage of Total)

Research Strand	Frequency (%) of Total Papers
Student-focused	83.6
Design-focused	46.4
Context and impact	10.9
Instructor-focused	6.2
Other	9.8



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A Contemporary Review of Research Methods Adopted to Understand Students' and Instructors' Use of Massive Open Online Courses (MOOCs)

Ruiqi Deng and Pierre Benckendorff

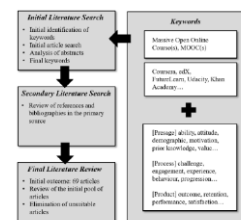
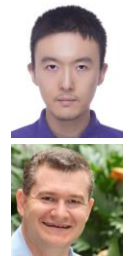


Fig. 1. Article search strategies



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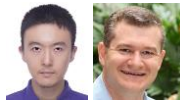
August 2017

A Contemporary Review of Research Methods Adopted to Understand Students' and Instructors' Use of Massive Open Online Courses (MOOCs)

Ruiqi Deng and Pierre Benckendorff

Year of Publication Completion	Frequency	Per cent
2014	14	26.4
2015	12	40.4
2016	7	13.2
Country		
United States	28	52.8
United Kingdom	6	11.3
Canada	5	9.4
Australia	3	5.7
Israel	3	5.7
Others	8	15.1
Type of article		
Journal article	40	75.3
Thesis/dissertation	9	17.0
Conference proceeding	3	5.7
Book chapter	1	1.8

Journal	h-index	Frequency	Per cent
Computers & Education	93	7	17.5
British Journal of Educational Technology	55	5	12.5
International Review of Research in Open and Distance Learning	33	5	12.5
Distance Education	25	3	7.5
Educational Media International	7	3	7.5
Others		17	42.5



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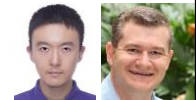
A Contemporary Review of Research Methods Adopted to Understand Students' and Instructors' Use of Massive Open Online Courses (MOOCs)

Ruiqi Deng and Pierre Benckendorff

Perspective	Frequency	Per cent
Student	48	90.6
Instructor	4	7.5
Both student and instructor	1	1.9

Type of Research Methods Adopted	Frequency	Per cent
Surveys	31	63.3
Interviews	14	28.3
Log files	12	24.5
Other qualitative methods	12	24.5

Number of Research Methods Used	Frequency	Per cent
One	36	67.9
Two	15	28.3
Three or above	2	3.8



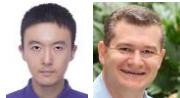
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A Contemporary Review of Research Methods Adopted to Understand Students' and Instructors' Use of Massive Open Online Courses (MOOCs)

Ruiqi Deng and Pierre Benckendorff, *International Journal of Information and Education Technology*, 7(8), 601-607.

"There are a number of research avenues which could be explored based upon the findings of this study. First, additional research strategies should be considered to understand students' and instructors' experience in using MOOCs." (p. 605)



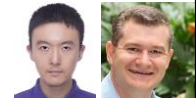
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Ruiqi Deng and Pierre Benckendorff, *International Journal of Information and Education Technology*, 7(8), 601-607.

"Second, triangulation of a wider range of research methods and data source should be undertaken. Beyond triangulation of surveys and interviews or log files, MOOC scholars are encouraged to combine other research methods to triangulate findings, such as diary studies and focus groups." (p. 605)



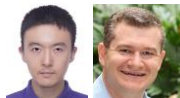
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A Contemporary Review of Research Methods Adopted to Understand Students' and Instructors' Use of Massive Open Online Courses (MOOCs)

Ruiqi Deng and Pierre Benckendorff, *International Journal of Information and Education Technology*, 7(8), 601-607.

"Apart from diary studies, other qualitative research approaches have also been adopted by MOOC scholars. Focus groups were either adopted on their own, or with other qualitative research methods to probe participants' motivation and experience." (p. 605)



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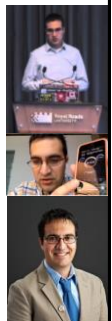
Quotes: Veletsianos et al. (2015-2016)

"To gain a deeper and more diverse understanding of the MOOC phenomenon, researchers need to use multiple research approaches (e.g., ethnography, phenomenology, discourse analysis) add content to them." (p. 583.)

Veletsianos, Collier, & Schneider (2015, May). Digging deeper into learners' experiences in MOOCs: Participation in social networks outside of MOOCs, notetaking and contexts surrounding content consumption. *BJET*, 46(3), 570-587.

"*Dependence on Particular Research Methods May Restrict our Understanding of MOOCs.*"

George Veletsianos & Peter Shepherdson's Study (2016). Systematic Analysis and Synthesis of the Empirical MOOC Literature Published in 2013-2015. *IRRODL*. <http://www.irrodl.org/index.php/irrodl/article/view/2248/2025>



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MOOC Research (6 studies)



MOOC Study #1: MOOC Research

A Systematic Review of Research Methods and Topics of the Empirical MOOC Literature (2014-2016)

Zhu, M., Sari, A., & Lee, M. M. (2018). A Systematic Review of Research Methods and Topics of the Empirical MOOC Literature (2014-2016). *The Internet and Higher Education*, 37, 31-39.



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Research Design



Research Purpose & Questions

To gain a deeper and more diverse understanding of the current MOOC phenomenon by reviewing recent articles.

1. What are the research methods researchers employed in empirical MOOC studies?
2. What are the research topics or focuses in MOOC studies?
3. How are researchers of empirical MOOC studies geographically distributed?
4. In terms of the delivery of the MOOC, what are the countries which are attracting the most research?



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Article Search Strategies



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Systematic Review of Research Methods in MOOCs (2014-2016)

(Zhu, M., Sari, A., & Lee, M. M., 2018)

	Quantitative	Qualitative	Mixed methods
Student-focused	39	9	26
Design-focused	19	12	17
Context and impact	9	6	5
Instructor-focused	0	3	2



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Systematic Review of Research Methods in MOOCs (2014-2016)

(Zhu, M., Sari, A., & Lee, M. M., 2018)

No.	Journal	Total
1	International Review of Research in Open and Distance Learning (IRRODL)	31
2	Computers & Education	12
3	British Journal of Educational Technology	9
4	Online Learning	7
5	Distance Education	5
6	Educational Media International	5
7	Internet and Higher Education	5
8	Journal of Computer Assisted Learning	5
9	Computers in Human Behavior	4
10	Open Learning	4
11	Journal of Online Learning and Teaching	3
12	Journal of Asynchronous Learning Network	3



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Systematic Review of Research Methods in MOOCs (2014-2016)

(Zhu, M., Sari, A., & Lee, M. M., 2018)

Location of MOOC Research Team Members (2014-2016)



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Location of MOOC Research Team Members (2014-2016)

(Zhu, M., Sari, A., & Lee, M. M., 2018)

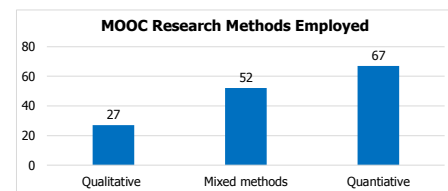


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Systematic Review of Research Methods in MOOCs (2014-2016)

(Zhu, M., Sari, A., & Lee, M. M., 2018)

RQ1: What are the research methods researchers employed in empirical MOOC studies? (N = 146)

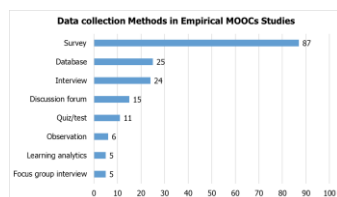


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Systematic Review of Research Methods in MOOCs (2014-2016)

(Zhu, M., Sari, A., & Lee, M. M., 2018)

RQ1: What are the research methods researchers employed in empirical MOOC studies?



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Specific Data Sources for MOOC Research (2014-2016)

(Zhu, M., Sari, A., & Lee, M. M., 2018)

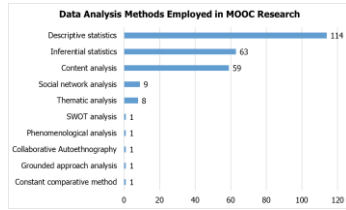


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Systematic Review of Research Methods in MOOCs (2014-2016)

(Zhu, M., Sari, A., & Lee, M. M., 2018)

RQ1: What are the research methods researchers employed in empirical MOOC studies?



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Specific Analytic Method for MOOC Research (2014-2016)

(Zhu, M., Sari, A., & Lee, M. M., 2018)

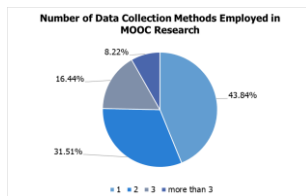


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Systematic Review of Research Methods in MOOCs (2014-2016)

(Zhu, M., Sari, A., & Lee, M. M., 2018)

RQ1: What are the research methods researchers employed in empirical MOOC studies?



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Number of Data Sources for MOOC Research (2014-2017)

(Zhu, M., Sari, A., & Lee, M. M., 2018)

NUMBER OF DATA SOURCES	TOTAL	PERCENT
1	64	43.84%
2	46	31.51%
3	24	16.44%
>3	12	8.22%
TOTAL STUDIES	146	100%



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Data Sources of MOOC Research (Note: when part of 2 or more data sources) (2014-2016)

(Zhu, M., Sari, A., & Lee, M. M., 2018)

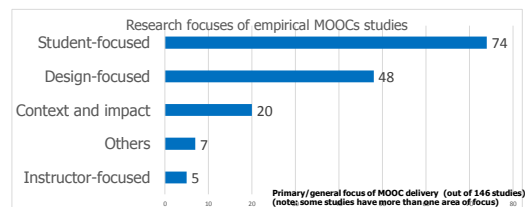


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Findings

(Zhu, M., Sari, A., & Lee, M. M., 2018)

• RQ2: What are the research focuses in MOOC studies?



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Systematic Review of Research Methods in MOOCs (2014-2016)

(Zhu, M., Sari, A., & Lee, M. M., 2018)

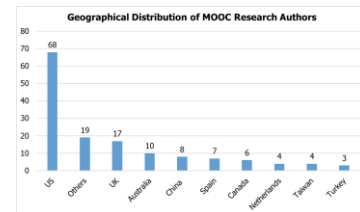
Specific Focus of MOOC Research (2014-2016)



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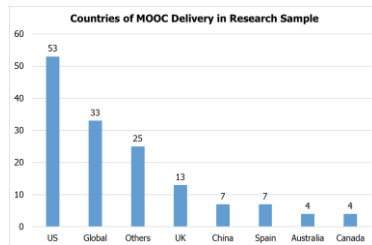
Findings (Zhu, M., Sari, A., & Lee, M. M., 2018)

- RQ3: How are researchers of empirical MOOC studies geographically distributed?



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Findings (Zhu, M., Sari, A., & Lee, M. M., 2018)



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Country of Origin of MOOC Delivery (2014-2017)

(Zhu, M., Sari, A., & Lee, M. M., 2018)



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February 2016

A Systematic Analysis and Synthesis of the Empirical MOOC Literature Published in 2013-2015

George Veletsianos and Peter Sheperdson, *IRRODL*, 17(2), 198-221
<http://www.irrodl.org/index.php/irrodl/article/view/2458/2655>

"Based on these results, we suggest that an expansion of the methodological approaches used in MOOC research is urgently needed. Given that research into MOOCs is expected to inform learning in *all* environments and not just MOOCs (Rose et al., 2015; Singer, 2014), a broader methodological toolkit is imperative." (p. 214)



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February 2016

A Systematic Analysis and Synthesis of the Empirical MOOC Literature Published in 2013-2015

George Veletsianos and Peter Sheperdson, *IRRODL*, 17(2), 198-221
<http://www.irrodl.org/index.php/irrodl/article/view/2458/2655>

"Fruitful future research endeavors in this area may focus on examining how particular methodologies have shaped the field, whether research methods are favored by researchers from particular disciplines, and some conferences and journals more than others distort the dominant narratives in the literature." (p. 214)



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MOOC Study #2: MOOC Research

A Systematic Review of MOOC Research Methods and Topics:
Comparing 2014-2016 and 2016-2017

Zhu, M., Sari, A., & Bonk, C. J. (2018). Presented at Ed Media Amsterdam.



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Systematic Review of Research Methods and Topics in MOOCs:

Comparing 2014-2016 and 2016-2017
(Zhu, M., Sari, A., & Bonk, C. J., 2018)

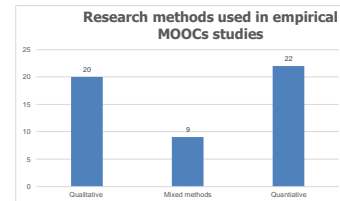


Figure 1a. Research methods used in empirical MOOCs studies (2016 – 2017) (n=51)



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Systematic Review of Research Methods and Topics in MOOCs:

Comparing 2014-2016 and 2016-2017
(Zhu, M., Sari, A., & Bonk, C. J., 2018)

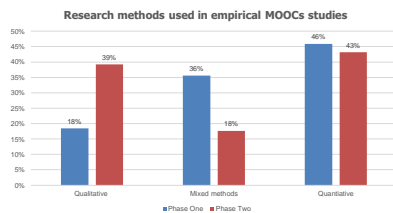


Figure 1b. Research methods used in empirical MOOCs studies (Note: Phase One (2014 – 2016) (n=146); Phase Two (2016 – 2017) (n=51))



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Systematic Review of Research Methods and Topics in MOOCs:

Comparing 2014-2016 and 2016-2017
(Zhu, M., Sari, A., & Bonk, C. J., 2018)

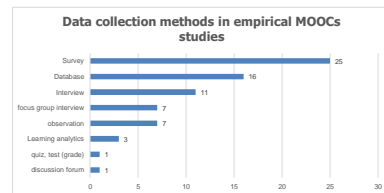


Figure 2a. Data collection methods used in empirical MOOCs studies (2016 – 2017) (n=51) (Note: some studies contain more than one data collection method)



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Systematic Review of Research Methods and Topics in MOOCs:

Comparing 2014-2016 and 2016-2017
(Zhu, M., Sari, A., & Bonk, C. J., 2018)

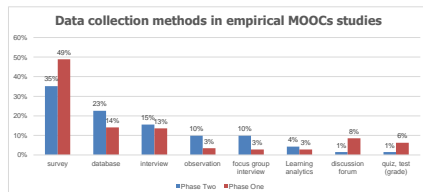


Figure 2b. Data collection methods used in empirical MOOCs studies (Note: some studies contain more than one data collection method and this figure only includes the main data collection methods)



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Systematic Review of Research Methods and Topics in MOOCs:

Comparing 2014-2016 and 2016-2017
(Zhu, M., Sari, A., & Bonk, C. J., 2018)

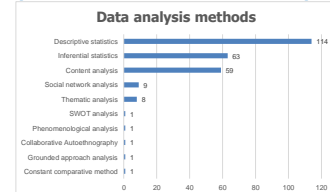


Figure 3a. Specific data analysis methods for MOOC research (2014-2016 and 2016 – 2017)



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Systematic Review of Research Methods and Topics in MOOCs: Comparing 2014-2016 and 2016-2017 (Zhu, M., Sari, A., & Bonk, C. J., 2018)

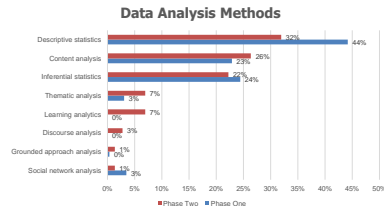


Figure 3b. Specific data analysis methods for MOOC research
(Note: some studies contain more than one data analysis method)

Systematic Review of Research Methods and Topics in MOOCs: Comparing 2014-2016 and 2016-2017 (Zhu, M., Sari, A., & Bonk, C. J., 2018)

Table 1
Specific topical focus of MOOC studies (2014-2017) (n=197)

Detailed Focus	Total
Retention and completion/dropout	17
Motivation	15
Assessment/instrument/evaluation	13
Engagement	12
Instructional/MOOC design	12
Learners' satisfaction	11
Communication/interaction	11
Learners' experience	10
Performance/outcome	9
Professional development	8
Learners' attitude	8
Higher education	8

Systematic Review of Research Methods and Topics in MOOCs: Comparing 2014-2016 and 2016-2017 (Zhu, M., Sari, A., & Bonk, C. J., 2018)

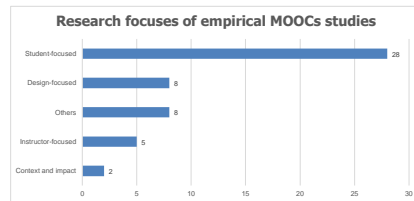


Figure 4a. Primary/general focus of MOOC delivery (2016 – 2017)
(n=51) (Note: some studies contain more than one area of focus)

Systematic Review of Research Methods and Topics in MOOCs: Comparing 2014-2016 and 2016-2017 (Zhu, M., Sari, A., & Bonk, C. J., 2018)

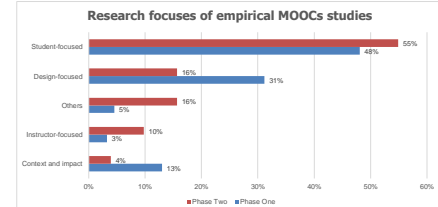


Figure 4b. Primary/general focus of MOOC delivery (Note: some studies contain more than one area of focus)

Systematic Review of Research Methods and Topics in MOOCs: Comparing 2014-2016 and 2016-2017 (Zhu, M., Sari, A., & Bonk, C. J., 2018)

Table 2

Research methods used in each research topic (2014-2017) (n=197)

	Quantitative	Qualitative	Mixed methods
Student-focused	55	16	31
Design-focused	22	16	18
Context and impact	10	6	6
Instructor-focused	0	7	3

Note. Some studies have more than one focuses. And we did not include the "other" category in this table.

Systematic Review of Research Methods and Topics in MOOCs: Comparing 2014-2016 and 2016-2017 (Zhu, M., Sari, A., & Bonk, C. J., 2018)

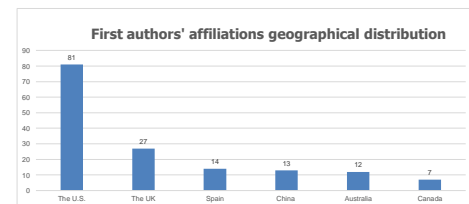


Figure 5. The location of the first author of MOOCs studies (2014 – 2017)
(n=197) (Note: this figure only includes the main countries)

Systematic Review of Research Methods and Topics in MOOCs: Comparing 2014-2016 and 2016-2017 (Zhu, M., Sari, A., & Bonk, C. J., 2018)

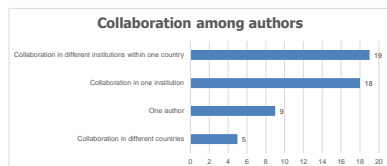


Figure 6. Collaboration among the authors of MOOCs studies (2016 – 2017) (n=51)



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Systematic Review of Research Methods and Topics in MOOCs: Comparing 2014-2016 and 2016-2017 (Zhu, M., Sari, A., & Bonk, C. J., 2018)

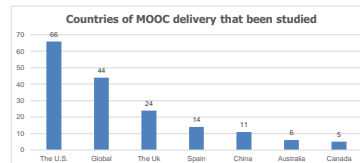


Figure 7. Countries of MOOC delivery in which the research was conducted (2014 – 2017) (n=197) (Note: this figure only includes the main countries)



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October 2015

Predictors of Retention and Achievement in a Massive Open Online Course

Greene, Oswald, & Pomerantz
American Educational Research Journal, 52(5), 925-955.
<http://aerj.sagepub.com/content/52/5/925.full.pdf+html>

"If MOOCs are to fulfill their promise as a way of providing all learners with opportunities to obtain education at a low cost, much more research is needed regarding how to engage these students and help them to be successful in these environments." (p. 952)



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Additional Findings



MOOC RESEARCH

Research Background

- MOOCs can be beneficial to both learners and instructors
(Hew & Cheung, 2014)
- Instructors are one of the five main components of MOOCs; the other four are learners, topic, material, and context
(Kop, 2011)
- Few studies have examined instructional design from MOOC instructors' perspectives
(Margaryan et al., 2015; Ross, Sinclair, Knox, Bayne, & Macleod, 2014; Watson et al., 2016)



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MOOC Study #3: MOOC Instructor Personalization and Addressing Learner Diversity

Bonk, C. J., Zhu, M., Kim, M., Xu, S., Sabir, N., & Sari, A. (in press). Pushing toward a more personalized MOOC: Exploring instructor selected activities, resources, and technologies for MOOC design and implementation. *The International Review of Research on Open and Distributed Learning (IRRODL)*.



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Research Purpose

This study explores instructor motivations for offering MOOCs and the design innovations in MOOCs to better understand MOOC design practices and to provide suggestions for future MOOC instructors.



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Study #3: Findings Recap



1. There is a lack of learner monitoring and feedback (i.e., mostly self and peer monitoring/feedback).
2. **More emphasis on personalization in the design of the course than in the delivery of it.**
3. Subtitles and transcripts are the most common ways to address cultural and linguistic differences.
4. Automated grading and feedback more prevalent than automated alerts, advice/counseling, and plagiarism detection.
5. **Instructors have high interest in learning techniques for personalization in their next MOOC.**



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Future Research Might Explore...

1. Specific instructional design practices for personalization and cultural sensitivity (e.g., focus groups, content analyses, active participation in MOOCs, reviews of historical records, additional surveys, or a combo).
2. **How emerging technologies (AR, VR, personal digital assistants, and AI) can be used to address learner needs.**
3. Need to develop guidelines, frameworks, and models for more engaging, culturally sensitive, and personalized learning environments.



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MOOC Study #4: MOOC Instructor Design Challenges and Considerations

Bonk, C., J., Zhu, M., & Sari, A. (2018, April 14). *MOOC Instructor Motivations, Innovations, and Designs: Surveys, Interviews, and Course Reviews*. Paper presented at the 2018 American Educational Research Association (AERA) annual meeting, New York City, NY.



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Research Questions

1. What motivates instructors to offer MOOCs?
2. What instructional innovations do MOOC instructors perceive?
3. What do instructors perceive as the strengths of their MOOCs?
4. How would they redesign the MOOC?



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Research Methods-Data collection

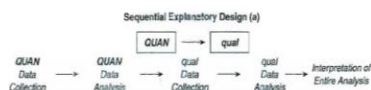
Sequential mixed methods design (Creswell & Clark, 2007)

Data Collection:

(1) surveys, (2) interviews, and (3) course reviews.

Participants:

- 143 survey participants (10% response rate)
- 12 interviewees



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Research Methods-Data collection

MOOC instructors interviewed

No.	Countries	Subject areas	Platforms
1.	The U.S.	Language and Literacy	Coursera
2.	The U.S.	Education	Coursera
3.	The U.S.	Education	Canvas
4.	The U.S.	Chemistry	Coursera
5.	UK	Public health	FutureLearn
6.	UK	Language and Literacy	FutureLearn
7.	Hong Kong	Math	Coursera
8.	Mainland China	Math	Coursera
9.	Canada	Psychology	Coursera
10.	Australia	Public Health	Open2Study
11.	Sweden	Computer Science	edX
12.	India	Management	edX



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Significance & Conclusion



1. This study provides a window into the decision making of more than 100 MOOC instructors. Few studies have tapped into such a database.
2. This study provides key insights into instructors' motivations for offering MOOCs as well as instructional innovations in MOOC design.
3. The results may inform MOOC stakeholders (i.e., institutions) of how to foster instructor motivation and instructional innovation in MOOCs.
4. This study can be used to train instructional designers on the design of MOOCs as well as the expectations of MOOC instructors that they may be working with.



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Future Research Might Explore...

1. The relationship between instructor motivation and the types of instructional innovations in MOOC design.
2. Changes in MOOC instructor motivation across several MOOCs.
3. MOOC instructor motivation by discipline, country, or region of the world.
4. MOOC instructional professional development and instructor teaching skill changes from designing MOOCs.



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October 2015

Predictors of Retention and Achievement in a Massive Open Online Course

Greene, Oswald, & Pomerantz, American Educational Research Journal, 52(5), 925-955.

<http://aer.sagepub.com/home/aer> DOI: 10.3182/ajer.52.5.925

"If MOOCs are to fulfill their promise as a way of providing all learners with opportunities to obtain education at a low cost, much more research is needed regarding how to engage these students and help them to be successful in these environments." (p. 952)



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MOOC Study #5: Malaysian and Indonesian MOOC Instructors

Sari, A., Bonk, C., J., & Zhu, M. (2018). MOOCs Design and Challenges: What can be Learned from Existing MOOCs in Indonesia and Malaysia?



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Research Questions

1. What are the instructors' reasons to offer MOOCs?
2. How do instructors design their MOOCs?
3. What challenges do instructors experience in designing their MOOC?



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Research Methods-Data collection

- **Research Design:** mixed method design (Creswell, 1999)
- **Data Collection:** Survey, interview, course review Web-based survey: 20 closed-ended questions + 2 open ended questions; 9 interview questions.
- **Participants:** 46 survey participants (15.6%) and 9 interviewees (3 Malaysian + 6 Indonesian)



Study #5: Findings Recap and Future Directions

1. Primary motives, include: (1) personal interest, (2) research purposes, (3) experience teaching a large online course, (4) institutional encouragement, and (5) altruism.
2. Offering recognition such as certificate, badge, points, or transfer credit to increase student enrollment.
3. Top challenges include encouraging collaboration, fostering engagement, video development, and time.
4. Future research might add perspectives from students, affiliated institutions, and MOOC providers



Khe Foon (Timothy) Hew (2018)

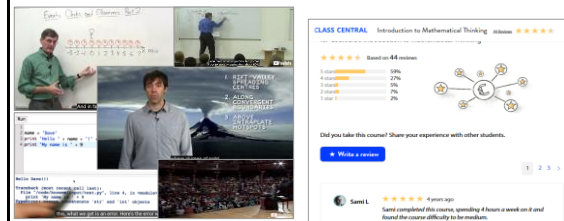
Hew, K. F. (2018). Unpacking the Strategies of Ten Highly Rated MOOCs: Implications for Engaging Students in Large Online Courses. *Teachers College Record*, 120(1).
<https://www.coursetalk.com/>

Hew (2018, p. 1) analyzed 4,565 coursetalk review comments of 10 highly rated MOOCs. He found "six key factors that can engage online [MOOC] participants and nine reasons for participant disaffection."

1. Problem-centric learning supported by clear explanations.
2. Active learning supported by timely feedback (e.g., assignments, projects, discussion).
3. Course resources that cater to participants' learning needs or preferences.
4. Instructor attributes (e.g., passion, enthusiasm, humor, variety of examples).
5. Peer interaction.
6. Instructor availability.



Study #6: May 16, 2018 Instructional Explanations in MOOC Videos (studio and classroom) Junghun Lee, Indiana University (study in process)



Future Directions

- An expansion of methodological approaches in MOOCs research is needed.
- Limited research still exists on instructor-related MOOC topics.
- Additional research might explore the role(s) of instructional assistants (or former learners who are tutors or mentors).
- Need to understand the learner better (drop-ins, latecomers, no-shows, engaged, non-engaged, drop-outs, etc.).
- Cross-cultural comparison research might indicate how MOOC research paradigms differ in various regions of the world.



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Slides and Proceedings Paper at TrainingShare.com:

<http://www.trainingshare.com> (go to "Archived Talks")

