

Impact van OER op het onderwijs: een internationale literatuurschouw

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OER aan de Radboud Universiteit

- Nog in opstartfase
- Radboudumc al verder in adoptie van OER (Nicolai van der Woert)
- Informatievaardigheden (Monique Schoutsen)

- Geen beleid tav OER
- Kan wetenschappelijke literatuur bijdragen aan adoptie OER?

Hoe meet je impact?

The screenshot shows the Open Syllabus OER Metrics website. The header includes the logo and navigation links: Explorer, Galaxy, About, Share, and social media icons for Facebook and Twitter. A dark blue banner contains the text: "OER Metrics tracks the adoption of openly-licensed textbooks and monographs in higher education, using licensing information from the Open Textbook Library and the Directory of Open Access Books."

Below the banner are four navigation icons: Top Titles (selected), Top Schools, School Map, and Time Series. A "Filter by" section on the left includes input fields for "Search by Title" and "School Name", dropdown menus for "Field", "EDU type (USA)", "Country", "State / Province", and "Since", and a "Textbooks Only" toggle.

The "Top Titles" section displays a list of books with their citation counts and scores:

	CITATIONS	SCORE
Think Python: How to Think Like a Computer Scientist Allen B. Downey Green Tea Press, 2012	925	45
The Precariat Guy Standing Multiple Editions, 2011	676	33
Introduction to Probability Charles M. Grinstead American Mathematical Society, 1997	596	29
Democratizing Innovation Eric Von Hippel MIT Press, 2005	448	22
Remix Lawrence Lessig Multiple Editions, 2008	436	22
Structure and Interpretation of Computer Programs Harold Abelson MIT Press, 1985	400	20
OpenIntro Statistics David M. Diez, Christopher D. Barr, Mine Cetinkaya-R...	330	17
Confronting the Challenges of Participatory Culture Henry Jenkins MIT Press, 2009	329	16
How to Think Like a Computer Scientist: Learning With Python Allen Downey, Jeff Elkner, Chris Meyers Green Tea Press, 2008	310	16
Tweets and the Streets		#10

Waar vind je literatuur over OER?

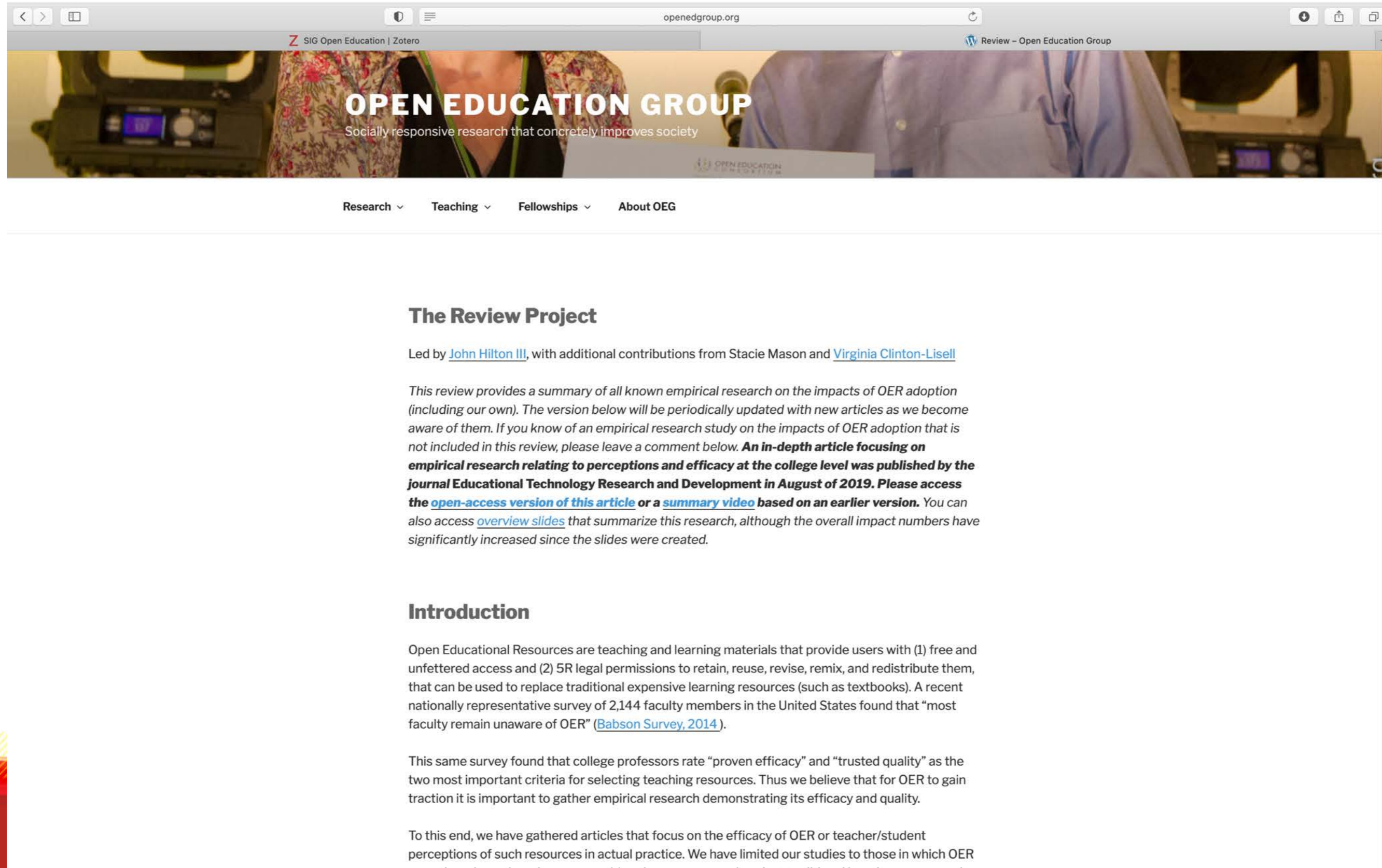
The screenshot shows the OER Knowledge Cloud website. The browser address bar displays `oerknowledgecloud.org`. The page features a large header image of a person in a white robe on a rocky mountain peak, with the text "THE OER KNOWLEDGE CLOUD" overlaid. Below the header is a navigation menu with links: HOME, RECORDS, ANALYTICS, ABOUT OER, and ABOUT THE CLOUD. A search bar contains the text "impact" and an "ADVANCED" search button. The main content area is divided into two columns. The left column has a section titled "THE OER KNOWLEDGE CLOUD" with the subtitle "A SURVEY AND REPOSITORY OF OER RESEARCH". Below this is a paragraph: "The OER Knowledge Cloud is a curated database and repository to identify, collect, preserve and disseminate documents related to open educational resources. There are currently 2756 published records by 4619 authors from 966 sources, with 1645 file archives." Underneath are three buttons: "BROWSE 2756 RECORDS", "BROWSE 4619 AUTHORS", and "BROWSE 966 SOURCES". The right column has an "ADD TO THE CLOUD" button and a "RECENT RECORDS" section. The first record is "Code of Best Practices in Fair Use for Open Educational Resources" by Jacob, Meredith; Jaszi, Peter; Adler, Prudence S.; Cross, William, posted April 7, 2021. The second record is "Towards Understanding the Students' Acceptance of MOOCs: A Unified Theory of Acceptance and Use of Technology (UTAUT)" by Altalhi, Maryam Muti, with a partial description of MOOCs.

Waar vind je literatuur over OER?

The screenshot displays the Zotero website interface. At the top, there is a navigation bar with links for Groups, Documentation, Forums, Get Involved, and Log In. A search bar is located on the right side of the navigation bar, and an 'Upgrade Storage' button is also present. The main content area shows a list of OER items in a table format. The table has three columns: Title, Creator, and Date. The list contains 320 items in total, with the first few rows visible. The items are sorted by date, with the most recent items at the top. The table is scrollable, and a '320 items in this view' message is displayed on the right side of the table. The sidebar on the left contains a list of filters and tags, including 'Academic', 'Access to Education', 'Access to Information', 'accreditation', 'Actins', 'adaptation', 'Adoption (Ideas)', 'adoption OER', 'Aldehyde Oxidoreductases', 'Amino Acid Sequence', 'Animals', 'apps', 'Arizona', 'articleread', 'assessment', 'authors rights', 'awareness', 'barriers', 'benefits', 'Body Fluids', 'Brain', 'British Columbia', and 'Business Administration Education'. There is also a 'Filter Tags' input field at the bottom of the sidebar.

Title	Creator	Date
Mobiele apparaten en apps als versnellers van open educational resources	Vries and Thuss	
An OER COUP: College Teacher and Student Perceptions of Open Educational Resou...	Bliss et al.	
MIT Open CourseWare 2009 Program Evaluation Findings Summary	MIT Open CourseWare	
Open leermiddelen in Nederland: waarheen en waarvoor?	Jacobi	
Mass customization of education by an institution of HE: What can we learn from ind...	Schuwer and Kusters	
Not All Rubrics Are Equal: A Review of Rubrics for Evaluating the Quality of Open Edu...	Yuan and Recker	
Formate assay in body fluids: application in methanol poisoning	Makar et al.	1975-06
Effect of bulbar acidification on basal secretion of acid and gastrin in dog	Nilsson	1975-12
Comparison of the amino acid sequences of three tissue-specific cytoplasmic actins...	Vandekerckhove and Weber	1978-10
Reconsidering Research on Learning from Media	Clark	1983
Kozma - 1994 - Will Media Influence Learning Reframing the Debate.pdf	Kozma	1994
Access to textbooks, instructional materials, in California's public schools	Oakes and Saunders	2002
Social Adaptive Navigation Support for Open Corpus Electronic Textbooks	Brusilovsky et al.	2004
Open Source in Education	Hart	2004
Open Educational Resources Serve the World	Johnstone	2005
College Textbooks - Enhanced Offerings Appear to Drive Recent Price Increases	GAO	2005
MIT Open CourseWare 2005 Program Evaluation Findings Report	Carson	2006
Open Educational Resources: Opportunities and Challenges	Hylen	2006
Towards a Global Learning Commons: CCLearn	Bissell and Boyle	2007
Models for sustainable OER	Downes	2007
A Review of the Open Educational Resources (OER) Movement: Achievements, Chall...	Atkins et al.	2007
AC 2007-2074: the wiki approach to teaching: using student collaboration to create ...	Hohne et al.	2007
E-book Use by Students: Undergraduates in Economics, Literature, and Nursing	Hernon et al.	2007
Open textbooks: Why? What? How? When	Frydenberg and Matkin	2007
Sustainability and Revenue Models for Online Academic Resources	Guthrie et al.	2008
Onderwijs en open leermiddelen	Onderwijsraad	2008
Opening up education: the collective advancement of education through open techn...	Carnegie Foundation for the Advancement of Teachi...	2008
Building Open Educational Resources from the Ground Up: South Africa's Free High ...	Petrides and Jimes	2008
How to collaboratively develop open-source textbooks (in hindsight !)	Horner and Blyth	2008
Learning efficacy and cost-effectiveness of print versus e-book instructional materia...	Annand	2008
Assessing e-books: Taking a closer look at e-book statistics	Sprague and Hunter	2008
Auteursrecht en Open leermiddelen	Guibault	2009
Hergebruik van materiaal in onderwijs- en onderzoekomgevingen	Keller and Mossink	2009
Downes - Wiley: a conversation on Open Educational Resources	Wiley and Downes	2009
Zeven mythes over open leermiddelen	Schuwer and Jansen	2009
E-book usage in an academic library: User attitudes and behaviors	Shelburne	2009

Waar vind je literatuur over OER?



The screenshot shows a web browser window with the URL `openedgroup.org`. The page features a header with the text "OPEN EDUCATION GROUP" and the tagline "Socially responsive research that concretely improves society". Below the header is a navigation menu with links for "Research", "Teaching", "Fellowships", and "About OEG". The main content area is titled "The Review Project" and includes the following text:

Led by [John Hilton III](#), with additional contributions from Stacie Mason and [Virginia Clinton-Lisell](#)

*This review provides a summary of all known empirical research on the impacts of OER adoption (including our own). The version below will be periodically updated with new articles as we become aware of them. If you know of an empirical research study on the impacts of OER adoption that is not included in this review, please leave a comment below. **An in-depth article focusing on empirical research relating to perceptions and efficacy at the college level was published by the journal Educational Technology Research and Development in August of 2019. Please access the [open-access version of this article](#) or a [summary video](#) based on an earlier version.** You can also access [overview slides](#) that summarize this research, although the overall impact numbers have significantly increased since the slides were created.*

Introduction

Open Educational Resources are teaching and learning materials that provide users with (1) free and unfettered access and (2) 5R legal permissions to retain, reuse, revise, remix, and redistribute them, that can be used to replace traditional expensive learning resources (such as textbooks). A recent nationally representative survey of 2,144 faculty members in the United States found that "most faculty remain unaware of OER" ([Babson Survey, 2014](#)).

This same survey found that college professors rate "proven efficacy" and "trusted quality" as the two most important criteria for selecting teaching resources. Thus we believe that for OER to gain traction it is important to gather empirical research demonstrating its efficacy and quality.

To this end, we have gathered articles that focus on the efficacy of OER or teacher/student perceptions of such resources in actual practice. We have limited our studies to those in which OER

Waar vind je literatuur over OER?

The screenshot shows a web browser window with two tabs. The active tab is titled "Open educational resources, student efficacy, and user perceptions: a synthesis of research published between 2015 and 2018 | SpringerLink". The address bar shows "link.springer.com". Below the browser window, there is an advertisement for "nature careers" with the text "Post your ad now". The main content area features the SpringerLink logo, a search bar, and a "Log in" link. The article title is "Open educational resources, student efficacy, and user perceptions: a synthesis of research published between 2015 and 2018". The author is "John Hilton III". The journal is "Educational Technology Research and Development", volume 68, pages 853-876 (2020). The article has 14k accesses, 16 citations, and 210 Altmetric metrics. The abstract states: "Although textbooks are a traditional component in many higher education contexts, their increasing price have led many students to forgo purchasing them and some faculty to seek substitutes. One such alternative is open educational resources (OER). This present study synthesizes results from sixteen efficacy and twenty perceptions studies involving 121,168 students or faculty that examine either (1) OER and student efficacy in higher education settings or (2) the perceptions of college students and/or instructors who have used OER. Results across these studies suggest students achieve the same or better learning outcomes when using OER while saving significant amounts of money. The results also indicate that the majority of faculty and students who have used OER had a positive experience and would do so again." The introduction begins: "For better or worse, the textbook remains a staple in American education. The literature regarding the use of textbooks and other curriculum materials is extensive and complex. Crawford and Snider (2000) argue that curriculum materials are a vital part of the educational". On the right side, there is a "Download PDF" button and a table of contents with sections: Abstract, Introduction, OER efficacy and perceptions research in higher..., Method, Results, Discussion, Conclusion, References, Funding, Author information, Ethics declarations, Additional information, Rights and permissions, and About this article. At the bottom right, there is another advertisement for "nature communications" with the text "Editors' Highlights".

Research Article | [Open Access](#) | Published: 06 August 2019

Open educational resources, student efficacy, and user perceptions: a synthesis of research published between 2015 and 2018

[John Hilton III](#)

Educational Technology Research and Development **68**, 853–876(2020) | [Cite this article](#)

14k Accesses | 16 Citations | 210 Altmetric | [Metrics](#)

Abstract

Although textbooks are a traditional component in many higher education contexts, their increasing price have led many students to forgo purchasing them and some faculty to seek substitutes. One such alternative is open educational resources (OER). This present study synthesizes results from sixteen efficacy and twenty perceptions studies involving 121,168 students or faculty that examine either (1) OER and student efficacy in higher education settings or (2) the perceptions of college students and/or instructors who have used OER. Results across these studies suggest students achieve the same or better learning outcomes when using OER while saving significant amounts of money. The results also indicate that the majority of faculty and students who have used OER had a positive experience and would do so again.

Introduction

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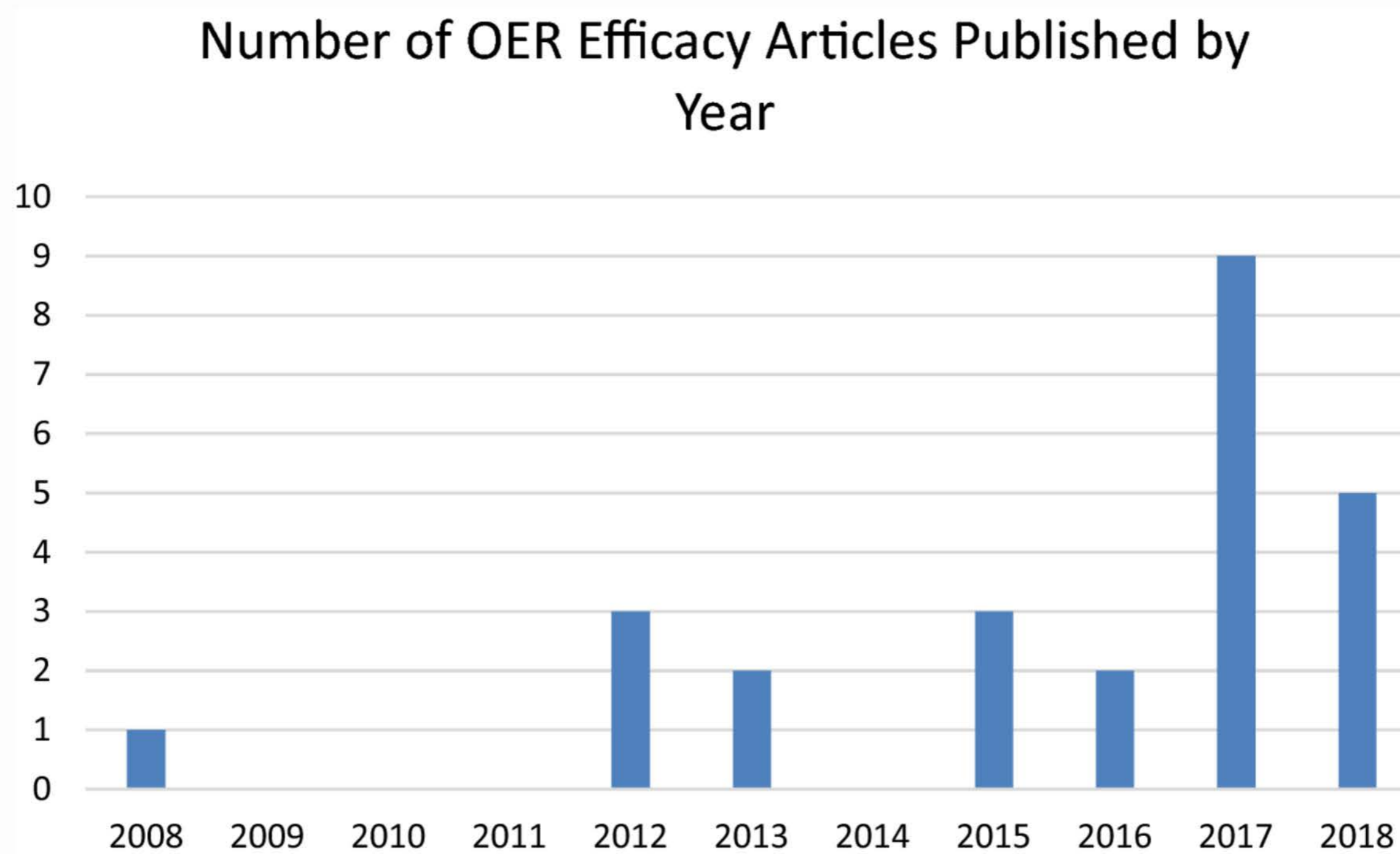
nature communications

Editors' Highlights

ersiteit

Fig. 1

From: [Open educational resources, student efficacy, and user perceptions: a synthesis of research published between 2015 and 2018](#)

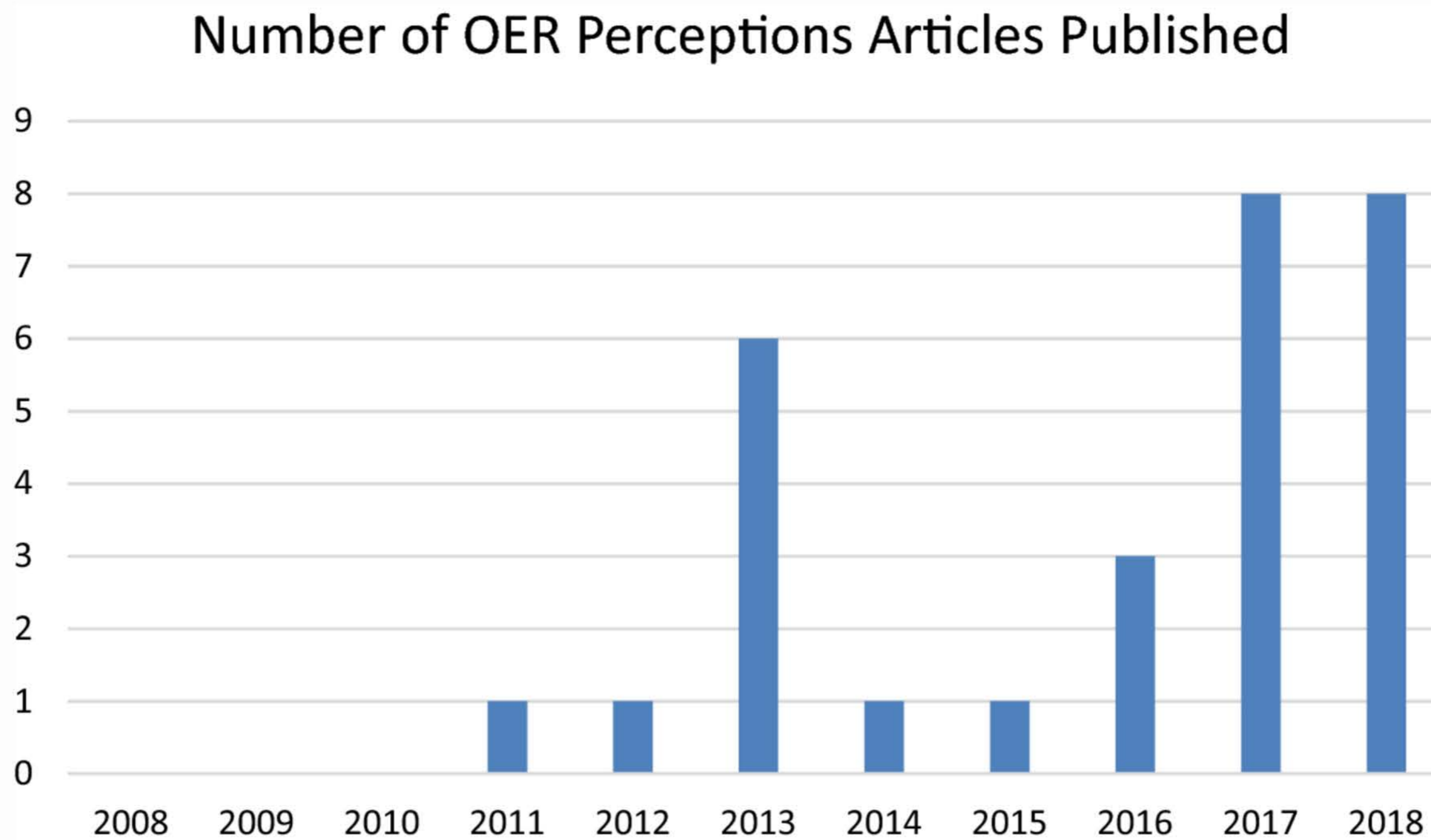


OER efficacy studies published 2008–2018

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Fig. 2

From: [Open educational resources, student efficacy, and user perceptions: a synthesis of research published between 2015 and 2018](#)



OER perceptions studies published 2008–2018

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Study	N treatment	N control	Attempted to control for teacher variables	Attempted to control for student variables	Measurement	Results
Wiley et al. (2016)	(Included in Hilton et al. 2016)	(Included in Hilton et al. 2016)	No	No	Drop rates	Statistically significant results favoring OER
Hilton et al. (2016)	2014	43,223	No	No	DFW rates	Statistically significant results favoring OER
Croteau (2017)	3847	Not provided	No	No	Withdrawal and completion rates, grades, final exam scores	No significant differences
Ozdemir and Hendricks (2017)	Not provided	Not provided	No	No	Exams, course grades, withdrawal rates	Potentially favorable, but statistical significance not discussed
Chiorescu (2017)	159	447	Yes	No	Pass and withdrawal rates, final grades	Statistically significant results favoring OER
Hendricks et al. (2017)	811	2400	Yes	No	Grade distribution, final exam score, CLASS survey	No significant differences in grade distribution, significantly higher final exam score, significantly lower in one of eight CLASS categories, no difference in CLASS overall
Grewe and Davis (2017)	73	73	No	Yes	GPA	Statistically significant results favoring OER
Gurung (2017)	2016	1312	No	Yes	Score on Psychology Quiz	Statistically significant results favoring CT
Winitzky-Stephens and Pickavance (2017)	7588	26,538	Yes	Yes	Pass and withdrawal rates, GPA	No significant differences for returning students; statistically significant results favoring OER. For new students
Choi and Carpenter (2017)	175	114	Yes	No	Exam scores, course grade	Final exam scores were lower with OER. No significant difference in overall course scores
Westermann Juárez and Muggli (2017)	66	30	No	Yes	Attendance, final exam, overall course score	Students using the Khan Academy OER had lower attendance but higher final exam scores than those using CT. Students using OER had lower final exam scores than those using CT. There were no significant differences overall course score
Jhangiani et al. (2018)	95	83	Yes	Yes	Exam scores	Statistically significant results favoring OER
Lawrence and Lester (2018)	117	162	Yes	No	Overall GPA, DFW rates	No significant differences
Clinton (2018)	204	316	Yes	Yes	Grades, withdrawal rates	No significant differences in grades, students using OER significantly less likely to withdraw
Colvard et al. (2018)	10,141	11,681	Yes	Yes	Grades, overall GPA, DFW rates	Statistically significant results favoring OER
Ross et al. (2018)	404	330	Yes	No	Course grades, completion	No difference in course grades, students using OER were significantly less likely to withdraw from the course
Total	27,710	86,709	Nine yes, seven no	Seven yes, nine no	Attendance, DFW rates, grades, GPA, exam scores, CLASS survey	Nine studies favored OER, two studies reported N.S., three had mixed results, one favored CT, and one did not discuss the statistical significance

Table 2 Summary of OER perception studies, 2015–2018

From: [Open educational resources, student efficacy, and user perceptions: a synthesis of research published between 2015 and 2018](#)

Study	N student surveys	N teacher surveys	Summary of results
Pitt (2015)	N/A	127	68% of faculty perceived greater student satisfaction with the learning experience when using OER
Delimont et al. (2016)	524	13	Students had a moderate preference for open and alternative textbooks. 12 of 13 teachers favored open and alternative textbooks
CA OER Council (2016)	351	16	44% of faculty felt OER were superior, 31% the same, and 25% worse. 42% of students rated OER higher than CT, 39% the same, and 11% worse
Illowsky et al. (2016)	325	N/A	64% of students said OER had equal quality to CT, 24% felt OER were higher quality, 12% felt OER were lower quality
Ozdemir and Hendricks (2017)	N/A	51	Most faculty felt the quality of OER was as good or better than CT. Only 15% of faculty who discussed student perceptions reported negative student comments
Jung et al. (2017)	N/A	137	62% of OpenStax adopters said the textbooks had the same quality as traditional textbooks; 19% thought the quality was better, and 19% thought it was worse
Hendricks et al. (2017)	143	N/A	72% of students said the OER had the same quality as CT. 21% said OER were better and 7% worse than CT
Cooney (2017)	67	N/A	42% said OER were much better than CT, 39% somewhat better, 16% neutral, and only 3% somewhat or much worse
Jhangiani and Jhangiani (2017)	320	N/A	56% of students would rather use OER than purchasing a CT, 24% were neutral, 20% preferred purchasing a CT to using OER
Watson et al. (2017)	1299	N/A	64% rated OpenStax textbooks as having the same quality as CT, 22% said they had higher quality, 14% lower quality.
Ikahihifo et al. (2017)	206	N/A	80% of students said the students said the OER was better than CT, 15% the same, 5% worse
Gurung (2017)	3328	N/A	Students rated the CT to be of overall higher quality than OER
Jhangiani et al. (2018)	178	N/A	The print OER was rated significantly higher than the CT. Both electronic and print formats of OER were rated higher than CT in some sub-categories
Abramovich and McBride (2018)	662	35	86% of students rated OER as either as useful or more useful than materials used in their other courses. 57% of instructors rated OER as better than CT, 40% the same, 3% worse
Lawrence and Lester (2018)	279	N/A	Students rated the CT to be of higher quality. 74% of students who used the CT said that they were satisfied versus 57% of students who used the OER
Clinton (2018)	458	N/A	Students rated CT and OER to be of equal quality
Griffiths et al. (2018)	2350		34% of students said OER were the same quality as CT, with 29% and 30% reporting respectively that they were slightly higher or much higher. 2% and 5% respectively said they were much or slightly lower quality
Carpenter-Horning (2018)	227	N/A	Students who used OER reported significantly higher levels of perceived cognitive learning in the course, relative to those using CT
Hunsicker-Walburn et al. (2018)	90	N/A	33% of these students said the quality of OER were better than CT, 54% said they were the same with 12% stating OER were worse
Ross et al. (2018)	129		46% said the OER were excellent relative to other textbooks, 27%, above average, 19% average, 6% below average, and 2% very poor
Total	10,807	379	In every study published between 2015 and 2018 that asked students or faculty to directly compare OER with CT, a strong majority said OER were as good or better. In the five studies in which ratings of students using CT were compared with ratings of students who used OER, two studies found higher ratings for CT, two found higher ratings for OER and one showed similar ratings

Amerika vs Nederland: vergelijkbare situaties?

