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Md. Nurul Islam

*Nanjing University, China*, dg1914501@smail.nju.edu.cn

Md. Tarik Been Aziz

*Lecturer, Library and Information Science, International Islamic University Chittagong*,  
tarikaziz@iiuc.ac.bd.com

Rupak Chakravarty

*Professor, Department of Library & Information Science, Panjab University*, rupak@pu.ac.in

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# **Bibliometric Analysis on Information Literacy (2017-2021): a Systematic Literature Review**

Md. Nurul Islam

School of Information Management, Nanjing University, China

E-mail: [dg1914501@smail.nju.edu.cn](mailto:dg1914501@smail.nju.edu.cn)

& Library and Information Science

International Islamic University Chittagong, Bangladesh

[nurul.islam@iiuc.ac.bd](mailto:nurul.islam@iiuc.ac.bd)

Md. Tarik Been Aziz

Lecturer

Library and Information Science

International Islamic University Chittagong

E-mail: [tarikaziz@iiuc.ac.bd.com](mailto:tarikaziz@iiuc.ac.bd.com)

Rupak Chakravarty

Professor

Department of Library & Information Science

Panjab University, [rupak@pu.ac.in](mailto:rupak@pu.ac.in)

## **Abstract**

### **Purpose**

The goal of this paper is to examine the literature published on information literacy (IL) between 2017 and 2021 and reveal the most important trends in IL publication.

### **Design/methodology/approach**

Scopus database was used to analyze specific aspects of publishing trends by looking at the literature indexed from 2017 to 2021 in the field of IL.

### **Findings**

In 2017, there was a significant increase in the number of citations to IL-related literature. In addition to "Janes-Jang SM" and the "College and Research Libraries," they were both prolific authors and sources. Most articles were published in the Journal of Academic Librarianship (97) during this time period. The United States was the most generous donor. Research in the IL field has recently focused on "information literacy," "academic libraries," "library instruction," and "assessment."

### **Originality/value**

Researchers can use the paper to learn about current trends in the literature on IL, as well as possible areas for further study, and it provides the names of the most productive authors, organizations, and countries, as well as the most popular IL keywords.

**Keywords:** Information Literacy, IL, Scopus, Systematic Review, SLR, Biblioshiny, Trend Topics, H index

## **Introduction**

We live in a technologically advanced world. Our education system, our workplaces, and even our entertainments are heavily reliant on data. To have a meaningful impact on the world we live in, we need to be able to use and understand information effectively. For that, we need to identify the sources of information in which bibliometric analysis in information literacy helps greatly. Being able to effectively navigate the deluge of data that has become available in the twenty-first century necessitates the development of strong information literacy skills. US President Barack Obama recognized the significance of information literacy by designating October 2009 as National Information Literacy Awareness Month.

According to Abt (1993), the number of published research papers and reviews may be used to quantify the amount of science, whereas citations can be used to estimate the quality of science (Brace, 1992). According to Baltussen and Kindler (2004) and Furlan and Fehlings (2006), a paper's citation index does not directly indicate its quality or significance, but rather it reflects the paper's visibility and impact within the scientific community. As a general rule, highly-cited articles are considered to be of superior quality (Levitt and Thelwall, 2009). The ratio of highly cited papers to the total number of papers published by scholars from a country is also stated to be used as a metric for measuring the quality of science in that country (Kostoff et al., 2008). Many bibliometric analyses have been published across a wide range of fields, reporting on the distribution of highly cited papers across academics, institutions, journals, and nations.

In recent years, information managers have implemented quantitative methodologies to more accurately and effectively assess library resources and services. In 1917, E. J. Cole and N.B. Eales first used the term "Statistical Bibliography" to describe bibliometrics, a sub-discipline of information science that uses quantitative methodologies. The term "bibliometrics" was coined by Alan Pritchard in 1969. "Librametry" was coined at the 1948 ASLIB conference by SR Ranga Nathan. The titles "Scientrometrics," "Informetrics," and "Webometrics," among others, are also used to describe it. [1] The use of mathematical and statistical approaches to examine how documents and publications are used in bibliometrics is defined by the British Standards Institute. A cited-record analysis is an approach to quantifying the records of human communication by analyzing and interpreting citations supplied in various types of literature.

This helps to identify important sources of information. It also aids in the planning and coordination of resource sharing, networking, and the formation of joint ventures and consortia. Because of this, it has emerged as a new research focus in the library and information science discipline. Research on "Information Literacy" was undertaken to provide an overview and characterize the most essential features of research activity and their progress throughout the last quarter of the 20th century, thereby providing data on research trends at the 21st century's commencement. In a nutshell, information literacy is the capacity to obtain, assess, and utilize information from a number of sources. For, a person is considered to be information literate if they've mastered the skills needed to find and use relevant information from a wide range of print and electronic sources. Those who learn these abilities will be able to find and get information from the most relevant sources in the most acceptable form for both information professionals and end-users. 'Information Literacy' refers to the ability to find and utilize information in the most efficient manner (IL). An information literate individual must be able to detect when information is needed and have the ability to search, assess, and apply effectively the information needed, according to the American Library Association Presidential Committee of Information Literacy.

The following IL-related parts of the literature were the focus of this study:

1. The number of publications is changing with time.
2. Country of publication.
3. How many authors each article has, and how they're arranged.
4. Examine the output of authors.
5. To determine the most productive authors, materials are distributed according to the author.
6. The institutions where the authors are affiliated.
7. A focus on publication presentation, frequency, and percentages in the various analyses

Even though many authors (Aharony, 2010; Kondilis et al., 2008; Nazim & Ahmad, 2007; Pinto et al., 2013) had already conducted studies to understand information literacy research trends by employing bibliometric methods for the literatures which had been published 2017 earlier. This study is different from those studies: it uses bibliometric analysis of the literature published from 2017 to 2021 instead.

### **Review of the literature**

Based on a bibliometric examination of scientific articles contained in the web of science and Scopus databases, he looked at the international scientific productivity on information literacy from 1974 to late 2011. There were two macro-domains in the sample: the most productive and the least productive. The first was the social sciences (SoS), which included subjects like information and documentation, communication, education, and management. The latter was the

field of health sciences (HeS), which included fields like medicine, nursing, and so on. The study's goal was to look at the evolution of research activity through time, taking into account the authors' output, the distribution and co-authorship of works, affiliation, and the most commonly utilized journals. The results showed that scientific publications grew exponentially in both domains ( $R^2 = 0.9544$  for SoS and  $R^2 = 0.9393$  for HeS), with Anglo-Saxon authors dominating. The productivity of authors was low (1.29 and 1.12 papers/author, respectively), and the dispersion of publications by the journal was 4.96 in SoS and 1.86 in HeS. In the SoS domain, scientific collaboration was at 53%, while in the HeS domain, it was at 69%. The locations of the authors' affiliations were widely dispersed. The author distributions in both domains followed Lotka's law, while the journal distributions followed Bradford's law. From 2005 to 2014, he examined the literature included in the Web of Science database on IL and employed the required bibliometric methods to examine specific elements of publishing trends (Pinto et al., 2019a).

According to the study's findings, there was a rise in IL literature from 2005 to 2014. For the years 2007, 2008, and 2011, there was a significant increase in the amount of literature on IL. The author and institute "Pinto, M" and "University of Granada, Spain" were both productive. The most productive journal was the Journal of Academic Librarianship, which published 97 papers throughout the time. The United States was the most generous contributor. In the IL domain, recent study issues included "digital divide," "media literacy," "pedagogy," "higher education," and "critical thinking." (Kolle, 2017).

This study used bibliometric analysis to examine and map the trends in information literacy research across 767 theses and dissertations in the subject of information literacy in the United States and Taiwan. According to the survey, the number of theses and dissertations on information literacy in Taiwan increased significantly (502, 65.45%) and were published in greater numbers than in the United States (265, 34.55 percent). There were considerable variations between the United States and Taiwan in the three types of literacy research, with 54.57 percent, 30.59 percent, and 14.84 percent dealing with information literacy, media literacy, and digital literacy, respectively. (Hsieh et al., 2013).

Scopus, which can be found at [www.scopus.com](http://www.scopus.com), provided the study's data. To determine the influence of the most productive countries and prolific institutions, researchers employed the Transformative Activity Index (TAI) and relative citation impact (RCI). The SCImago Journal Rank and source normalized impact per manuscript were calculated using the SCImago Journal and Country Rank, which may be found at [www.scimagojr.com/](http://www.scimagojr.com/).

The investigation discovered that in this subject area, 1990 documents from 79 nations were published. There are 160 journals that have published these publications, with an average of 12.51 papers per journal. These papers have received 10,025 citations, averaging 5.0 citations per

publication. The study also discovered that information literacy literature is published in 16 languages, with English accounting for the majority of the papers (1,879 in total) (94.4 per cent). The year with the biggest increase in publications (106.7%) was 2005. The United States submitted the most papers, with 1,035 (52%) of the total. Furthermore, three of the 15 most productive countries had TAIs greater than 100, while 12 had TAIs less than 100. In total, 160 institutions from around the world have contributed to the field of information literacy research. The study also discovered that a single author might publish up to 828 pieces of literature on the subject (41.6 per cent). The United States submitted the most papers, with 1,035 (52%) of the total. Furthermore, three of the 15 most productive countries had TAIs greater than 100, while 12 had TAIs less than 100. In total, 160 institutions from around the world have contributed to the field of information literacy research. The study also discovered that a single author might publish up to 828 pieces of literature on the subject (41.6 per cent).

With 1,035 papers (52 percent), the United States submitted the most. In addition, three of the 15 most productive countries had TAIs greater than 100, while the remaining 12 had TAIs less than 100. In total, 160 institutions from all around the world have contributed to the study of information literacy. According to the study, a single author can publish up to 828 pieces of literature on the subject (41.6 per cent). Universidad de Granada, Granada, Spain, produced the most articles (24, or 1.2%) and received the most citations (61, or 0.6%), whereas University of Strathclyde's publications have the highest RCI (2.7). Mara Pintos of the Universidad de Granada has published the most papers (18) and has been cited 78 times. (Bhardwaj, 2017)

A Scopus database search yielded 1,990 document records. The author designed and conducted a search for documents relating to the idea of information literacy using the Scopus database. The study only looked at documents that were published between January 1, 2001, and December 31, 2012.

The data were then subjected to various bibliometric analysis by the author. The number of publications and citations has increased over time, according to the author, however, the average citations per publication (ACPP) has declined dramatically within the time period investigated. The majority of this topic's literature is written in English and produced in the United States. The majority of articles in the social sciences and humanities on information literacy came from wealthy countries. (Koos, 2019).

Pinto et al., (2019) studied a bibliometric analysis of the scientific production on Mobile Information Literacy (m-IL) in Higher Education published between 2006 and 2017, using papers from Web of Science (WoS), Scopus, Library and Information Science Abstracts (LISA), Library and Information Science and Technology Abstract (LISTA), and Education Resources Information Center (ERIC). Through statistical and co-occurrence word analyses of the titles and keywords used to index papers, they aimed to: a) identify the most relevant journals that publish

literature in the field, b) calculate the authors' average productivity and identify the most productive authors, and c) discover the most significant trends in the academic field. Their research's bibliometric findings offered a glimpse of the literature on Mobile Information Literacy, highlighting the most important journals, authors, and trending keywords.

Research on mobile information literacy (m-IL) in higher education published between 2006 and 2017 was studied by Pinto et al. using papers from the Web of Science (WoS), Scopus, Library and Information Science Abstracts (LISA), Library and Information Science and Technology Abstracts (LISTA), and Education Resources Information Center (ERIC) (ERIC). Aiming to: a) identify the most relevant journals that publish academic literature, b) calculate the average productivity of authors and identify the most productive authors, and c) discover the most significant trends in the academic field, they used statistical and co-occurrence word analyses of the titles and keywords used to index papers. Bibliometric analysis of their findings revealed the most influential journals, authors, and trending keywords in the field of Mobile Information Literacy.

With no date limits on their search, researchers Nazim and Ahmad(2007) examined 607 journal articles in the Library and Information Science Abstracts (LISA) Plus database for references to the term "information literacy." Between the 1980s and the early 2000s, there was a noticeable growth in the number of publications. The vast majority of papers (88.3%) in this survey were written in English and published in the United States (51.2 percent ). Articles on information literacy had been published in 32 countries. A similar investigation was conducted by Kondilis et al. (2008); see below) to assess the research output in selected disciplines connected to health literacy in current EU members and in the four EU candidate countries now waiting to join: Norway, Switzerland, and the United States. When compared to the United States, the health literacy research produced by the 25 European countries was less than one-third of what was expected. Germany, Italy, and France are the next most prolific European nations when it comes to health literacy studies, followed by the Netherlands and Sweden.

Aharony (2010) examined 1,970 documents published in the Web of Science database between 1999 and 2009 on the issue of "information literacy." According to his findings, 96.3 percent of the publications were in the English language and 54.1 percent of the documents were published in the United States. In addition, he highlighted that the number of publications on information literacy had been rising steadily, and that health and medicine were becoming key topics of study for literacy scholars.

### **Bibliometric studies on information literacy**

Using the search in the aforementioned databases (Web of Science, Scopus, LISA, LISTA, and ERIC) and the latest study by(Uribe-Tirado & Alhuay-Quispe, 2017) fifteen international

bibliometric studies on Information Literacy have been published in the past decade. Research on general output (countries, authors, and journals), studies on specific subject areas, and studies on a specific publication or situation can all be categorized into three broad categories.

The bulk of bibliometric studies that identify the most prolific countries, authors, journals, languages, etc. (Aharony, 2010; Bhardwaj, 2017; Kim & Lee, 2017; Kollé, 2017a; Majid et al., n.d.) found a total of 1990 papers published in 160 journals between 2001 and 2012 by authors from 79 countries in the Social Sciences and Humanities discipline, based on Scopus. For the years 2004–2014, Kollé(2017) analyzed Web of Science data to identify 1,909 papers published in 389 journals by authors from 75 different countries. In light of these findings, it is obvious that publications on IL have grown significantly in the previous two decades, independent of the database used, from varied settings (over 70 nations) and many publishing spaces (over 100 journals). As a result of changes in terminology (multiliteracy, transliteracy, media and information literacy), as well as conceptual shifts, there has been a minor reduction in the past two years (Standards vs. Frameworks). All of the authors and journals are from the United States, the United Kingdom and Canada.

When looking at the recent production of metric research with a subject area concentration, we can detect coincidences among the studies. In this regard, the field of Informa- tion Science is the most fruitful because of its close ties to IL and the academic affiliations of the writers and the scope of the publications. IL research in the social sciences and health sciences has also been examined. Assessment, information competences, e-learning, libraries, and research are some of the primary concerns (Pinto et al., 2013). However, there are few references to "Mobile Information Literacy" in these field-specific studies.

The Journal of Information Literacy was studied by Tallolli and Mulla(2011) who looked at one of the most important specialized publications in the field of information literacy. The number of citations a work receives after it is published in a journal is the topic of this study. There were 531 citations in total for 31 papers published in 2015, with an average citation count of 21.31 per paper. A total of 220 authors from the United Kingdom, the United States of America, and Canada have contributed to a total of 155 publications published between 2011 and 2015. Panda et al. (2013) published a study in the same journal that covered the years 2007–2012, which Tallolli and Mulla's work adds to. These writers demonstrated that library and information science scholars have made the most significant contributions to the field of IL. After the United States and Canada, the majority of the authors are from Great Britain.

Analysis of the PhD theses on IL produced in the United States and Taiwan from 1988 to 2010 was conducted by Hsieh et al. (2013). The United States was once again the world's leading publisher of scientific publications, though Taiwan saw a surge in output.

Although these metric studies on Information Literacy in Higher Education reflect the field's evolution in various contexts, the lack of attention to Mobile Information Literacy in Higher Education is evident. Thus, our bibliometric study, which takes into account the relationship between Information Literacy, Mobile Learning, and mobile illiteracy, is both relevant and timely.

### **Objectives of the study**

There has been an upsurge in publication activity on information literacy, which led to the decision to conduct a bibliometric analysis. Major goals were to research the following: publication types and language distribution of papers for 2017-2021, year distribution of articles, authors, institutions, nations, and journals; the most popular keywords; and the top ten most-cited articles and their features.

### **Research Questions**

The study was conducted to answer of the following questions:

- RQ: 1 What are the sources of information literacy literature?
- RQ: 2 What are the most popular journals in information literacy literature?
- RQ: 3 What are the most cited countries in information literacy literature?
- RQ: 4 Who are the top productive authors in information literacy literature?
- RQ: 5 What are the most frequent author keyword in the field?

### **Materials and Methods**

On February 4, 2022, data on "information literacy" was found in the SCOPUS database by searching the article's title keywords. For this research, we culled through 928 publications. The bibliometrix R package was first installed and loaded into R Studio. To launch the app, type biblioshiny () in R and press enter. For the current bibliometric analysis, we used the biblioshiny app for bibliometrix from R statistical package. Bibliometric analysis is made easier with the tool's numerous capabilities. Non-coders can use it to access the bibliometrix tool through a web browser. On Biblioshiny's interface, a SCOPUS file in the.bib format was finally uploaded. For data analysis, spreadsheet and.png files were obtained in accordance with the study's goals. In order to make the visual presentations, the VOS Viewer application was employed.

### **Results and Discussion**

#### **Main Information**

Table 1 shows the fundamental bibliometric data on information literacy that was acquired through the biblioshiny app. From 2017 to 2021, a total of 928 papers were gathered from 253 different sources. There are an average of 3.91 citations per document and 0.8668 citations per year for each document. There are 1904 total author's keywords and 32452 total references found

in the search results. There are 858 journal articles and 38 book reviews in this collection. 246 single-author documents and 1569 multi-author documents have been written.

Table No 1: Information abstract	
Description	Results
MAIN INFORMATION ABOUT DATA	
Timespan	2017:2021
Sources (Journals, Books, etc)	253
Documents	928
Average years from publication	2.87
Average citations per documents	3.791
Average citations per year per doc	0.8668
References	32452
DOCUMENT TYPES	
Article	858
Erratum	1
Letter	1
conference paper	3
Review	38
Editorial	10
Note	17
Review	52
DOCUMENT CONTENTS	
Keywords Plus (ID)	839
Author's Keywords (DE)	1904
AUTHORS	
Authors	1815
Author Appearances	2254

Authors of single-authored documents	246
Authors of multi-authored documents	1569
AUTHORS COLLABORATION	
Single-authored documents	282
Documents per Author	0.511
Authors per Document	1.96
Co-Authors per Documents	2.43
Collaboration Index	2.43

### Source Impact

Table 2 shows the most popular journals in the subject of information literacy for researchers. College and Research Librarians placed first in citations among researchers, with 17 papers from around the world (n-223). There are 178 references to the journal Computer in Human Behaviours, followed by 137 references to the journal Computer in Information Literacy, which has 23 publications. Despite having fewer articles (n-01), the Behavior and Information Technology journal has 46 total citations.

Source	h_index	g_index	m_index	TC	NP	PY_start
College and Research Libraries	8	14	1.33	223	17	2017
Computer in Human Behaviors	3	3	0.5	178	3	2017
Computer in Information Literacy	5	10	0.83	137	23	2017
Reference Service Review	6	7	1	102	24	2017
Reference Librarian	4	7	1	69	7	2017
American Behavioral Scientist	1	1	.5	62	1	2021
British Journal of Educational Technology	2	2	0.33	54	2	2017
ASLIB Journal of Information Management	5	6	0.83	47	7	2017

Behavior and Information Technology	1	1	0.25	46	1	2019
College and Undergraduate Libraries	4	5	0.66	39	9	2017

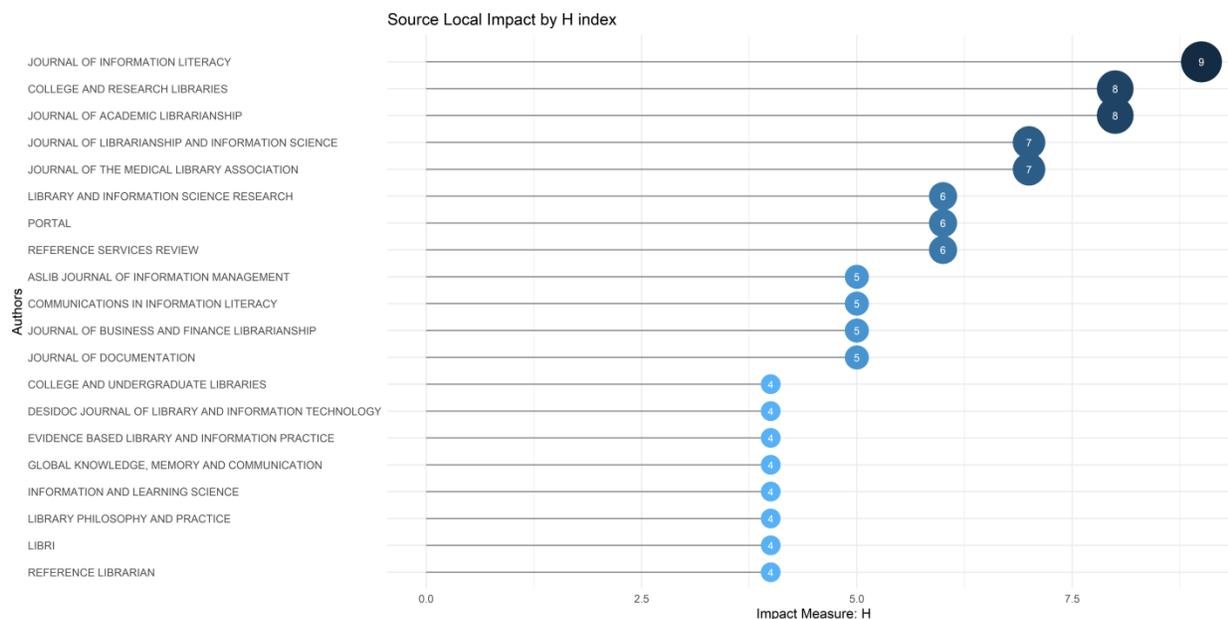


Fig. 1: Sources Impact by h index

### Most global cited documents

Table 3 shows the most global cited document in the subject of information literacy. HATLEVIK OE, 2018, COMPUT EDUC placed first in total citations, with 109 citations from around the world. There are 84 citations to the document YU T-K, 2017, COMPUT HUM BEHAV, followed by 62 citations to the document JONES-JANG SM, 2021, AM BEHAV SCI. Both ERLINGER A, 2018, COLL RES LIBR and MARTZOUKOU K, 2017, J DOC are lowest in getting citations which are 24 in number.

Table 3: Most Global Cited Documents

Document	Total Citations	TC per Year	Normalized TC
HATLEVIK OE, (2018), COMPUT EDUC	109	21.8	19.367
YU T-K, (2017), COMPUT HUM BEHAV	84	14	10.908
JONES-JANG SM,	62	31	73.764

(2021), AM BEHAV SCI			
ŠORGO A, (2017), BR J EDUC TECHNOL	52	8.667	6.753
JULIEN H, (2018), COLL RES LIBR	51	10.2	9.062
ÇOKLAR AN, (2017), COMPUT HUM BEHAV	51	8.5	6.623
KHAN ML, (2019), BEHAV INF TECHNOL	46	11.5	13.868
SCHERER R, (2017), COMPUT HUM BEHAV	43	7.167	5.584
ANGELL K, 2017, COMMUN INF LIT(2017)	40	6.667	5.194
LLOYD A, (2017), J INF LIT	37	6.167	4.805
TEWELL EC, (2018), COLL RES LIBR	35	7	6.219
STOPAR K, (2019), SCIENTOMETRICS	30	7.5	9.044
KOLLE SR, (2017), ELECTRON LIBR	28	4.667	3.636
PUNTER RA, (2016), EUR EDUC RES J	27	4.5	3.506
BLUEMLE SR, (2018), PORTAL	25	5	4.442
LANNING S, (2017), J ACAD LIBRARIANSH	25	4.167	3.247
ERLINGER A, (2018), COLL RES LIBR	24	4.8	4.264
MARTZOUKOU K, 2017, J DOC	24	4	3.117

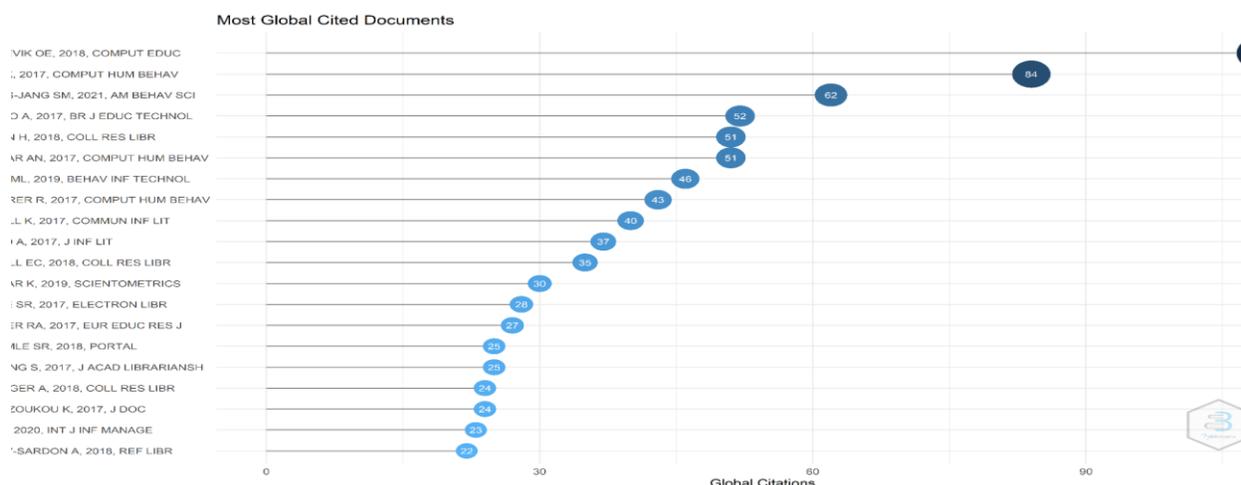


Fig. 2: Most Global Cited Documents

### Most Cited Countries

The following table 4 and Fig. 3 presents the lists of the countries with the most citations on Information Literacy. The United States of America had the most citations (648) followed by Norway (157), the United Kingdom (146), and other countries. Both Germany and India rated 10th with 69 citations each.

Table 4: Most Cited Countries in Information Literacy.

Country	Total Citations	Average Article Citations
USA	648	3.682
NORWAY	157	52.333
UNITED KINGDOM	146	4.562
CHINA	137	5.48
SLOVENIA	115	14.375
PAKISTAN	91	4.789
GERMANY	69	8.625
INDIA	69	2.226

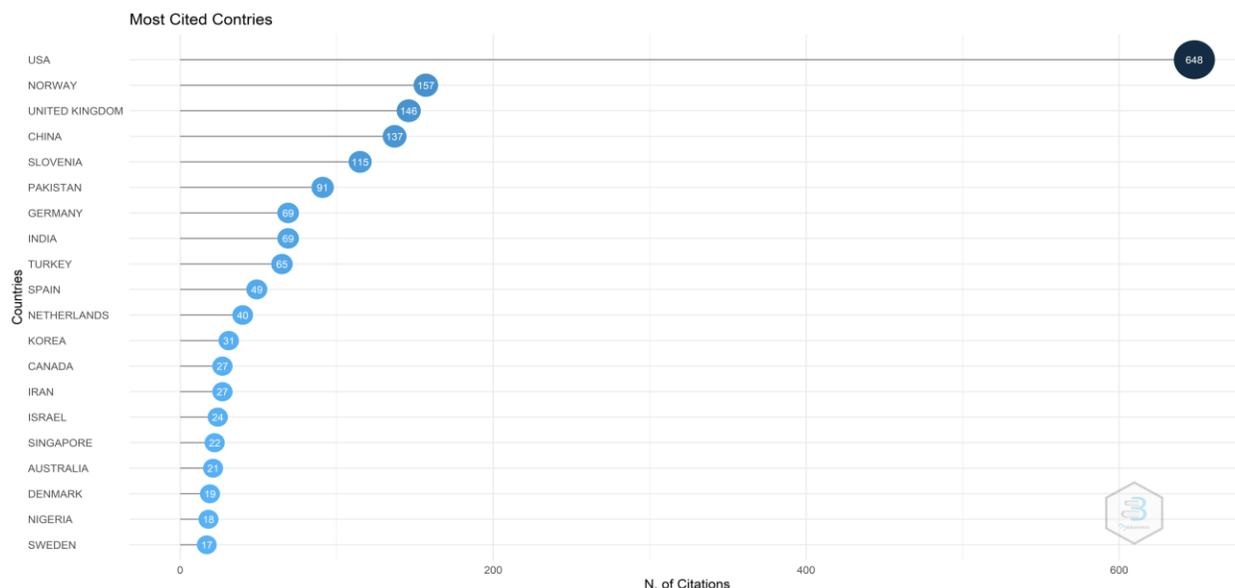


Fig. 3: Most Cited Countries

### Author Impact

Table 5 and fig 4 displays the productivity of the top ten most productive authors based on their publications, citations, and h-index. The most cited author was Janes-Jang SM, according to the publication count (n-62). Only three articles by Click AB were cited 12 times.

Author	h_index	g_index	m_index	TC	NP	PY_start
Janes-Jang SM	1	1	0.5	62	1	2021
Erlinger A	1	1	0.25	24	1	2018
Johnson N	1	1	0.2	14	1	2018
Click AB	2	3	0.33	12	3	2017
Ibrahim GR	1	1	0.16	11	1	2017
Gur H	1	1	0.25	10	1	2019
Afolabi MT	1	1	0.33	9	1	2020
Kelly JE	1	1	0.25	3	1	2019
Karim AA	1	1	0.33	1	1	2020
Juric M	1	1	0.5	1	1	2020

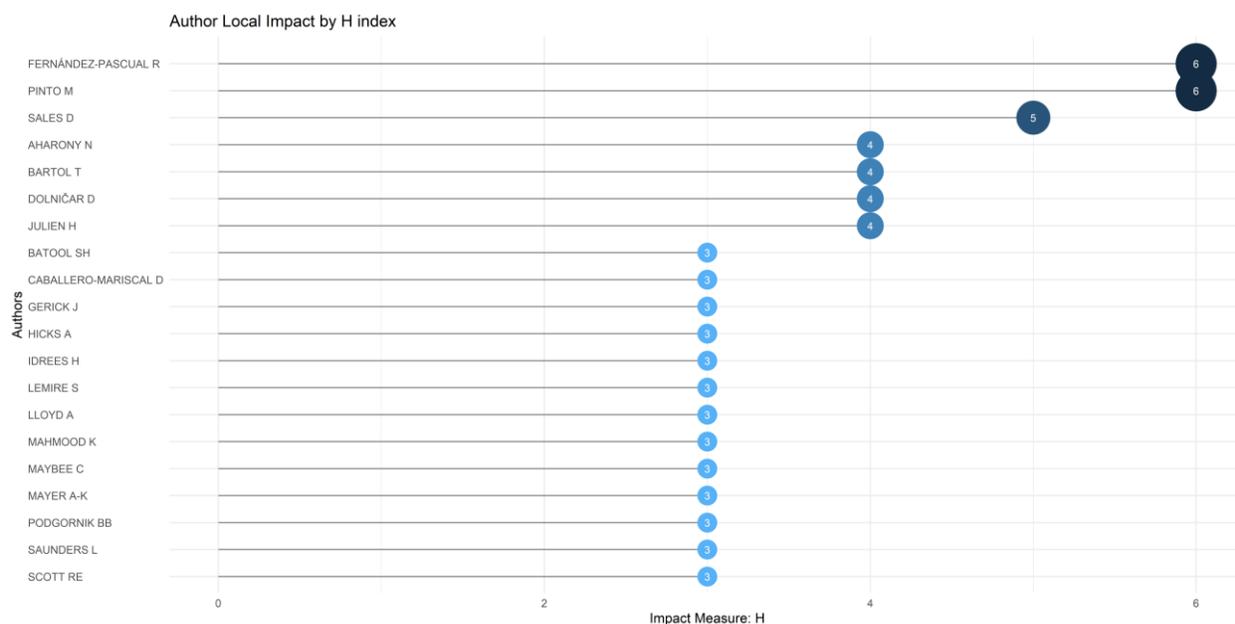


Fig. 4: Author Local Impact by H index

### Most Frequent Authors Keywords

If you're a librarian, you know that information literacy is going to be the most frequently used word (n-524) in the field. But there are many other aspects of library management, including academic libraries (n-60), library instruction (n-44) and so on with keywords such as assessment and higher education.

Table 6: Top 10 Author Keywords with their Frequencies	
Words	Occurrences
Information literacy	524
Academic libraries	60
Library instruction	44
Assessment	41
Higher education	34
Information literacy instruction	28
Digital literacy	24
Information literacy skills	23
Collaboration	21

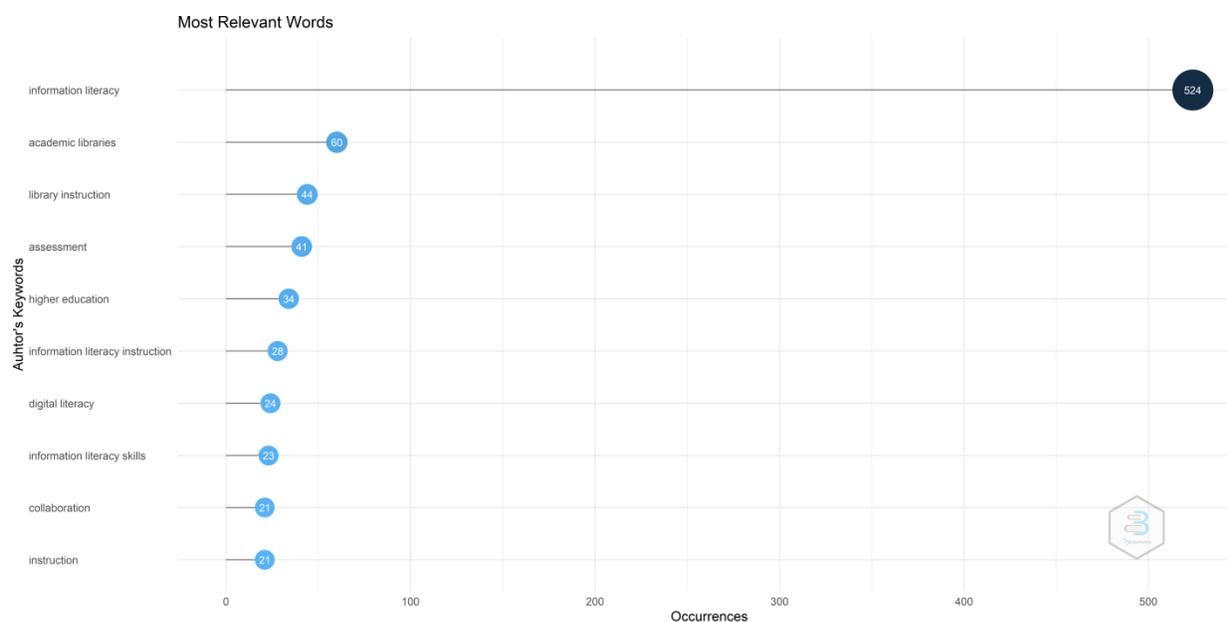


Fig 5: Most Relevant Words

### Trend topics

Digital literacy, media literacy, health information literacy and critical pedagogy are the most recent topics in the period of (2017-2021) occurs in 2019-2021. The topics of information literacy skills, information literacy, business information literacy are prevalent in all time without 2017. The topic of Covid-19 was introduced in 2020 first. Social justice was used only in 2017. The topics of higher education, collaboration, undergraduate students appear all the time of (2017-2021).

Table 7: Trend topics on Information literacy

Item	freq	year_q1	year_med	year_q3
Social justice	5	2017	2017	2018
Transfer students	5	2017	2017	2017
Collaboration	21	2017	2018	2021
Undergraduate students	17	2017	2018	2021
School libraries	10	2017	2018	2019
Universities	8	2017	2018	2020
Business information literacy	7	2018	2018	2021
Information literacy	524	2018	2019	2021
Academic libraries	60	2017	2019	2020
Library instruction	43	2018	2019	2020

Assessment	41	2017	2019	2020
Higher education	34	2017	2019	2021
Information literacy instruction	28	2019	2020	2021
Information literacy skills	23	2018	2020	2021
Fake news	18	2019	2020	2020
Information	15	2018	2020	2021
Literacy	15	2019	2020	2021
Digital literacy	24	2019	2021	2021
Media literacy	14	2019	2021	2021
Covid-19	5	2020	2021	2021
Critical pedagogy	5	2019	2021	2021
Health information literacy	5	2019	2021	2021

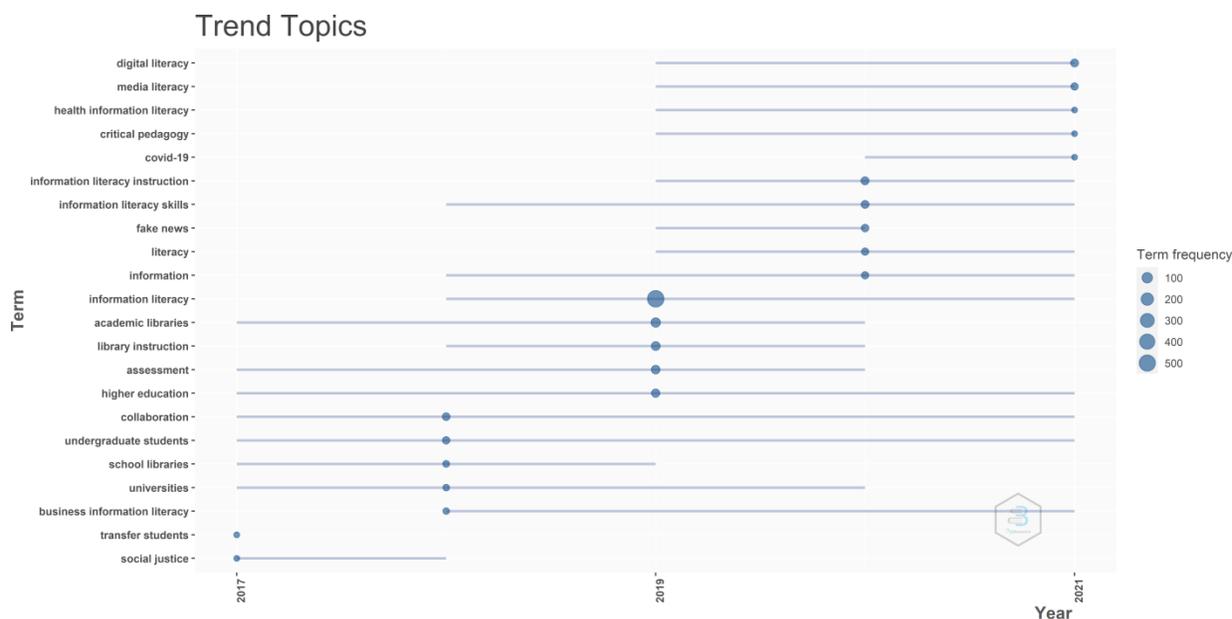


Fig. 6: Trend topics on IL

## Conclusion

There is a bibliometric analysis of publications published on information literacy indexed in Scopus between 2017 and 2021. Between 2017 and 2021, the amount of literature on IL increased steadily (928 documents). Average citations per documents 3.791, article; those published in 2017 received the highest citations 779. It is the United States that comes out on top in the citations. According to Scopus,, the Journal of Reference Service Review published 24 publications on the information literacy issue during 2017-2021. The most-cited author was Janes-Jang SM,in 2021, his total citation was 62. There are 524 occurrences of the keyword "information literacy," which makes it the most popular.

## References:

- Abt, H. A. (1993). Institutional productivities. *Publications of the Astronomical Society of the Pacific*, *105*, 794. <https://doi.org/10.1086/133232>
- Aharony, N. (2010). Information literacy in the professional literature: An exploratory analysis. *Aslib Proceedings*, *62*(3), 261–282. <https://doi.org/10.1108/00012531011046907>
- Angell, K., Tewell, E., & Long Island University, Brooklyn. (2017). Teaching and Un-Teaching Source Evaluation: Questioning Authority in Information Literacy Instruction. *Commfolit*, *11*(1), 95. <https://doi.org/10.15760/commfolit.2017.11.1.37>
- Baltussen, A., & Kindler, C. H. (2004). Citation Classics in Anesthetic Journals: *Anesthesia* & *Analgesia*, 443–451. <https://doi.org/10.1213/01.ANE.0000096185.13474.0A>
- Bhardwaj, R. K. (2017). Information literacy literature in the social sciences and humanities: A bibliometric study. *Information and Learning Science*, *118*(1/2), 67–89. <https://doi.org/10.1108/ILS-09-2016-0068>
- Bluemle, S. R. (2018). Post-Facts: Information Literacy and Authority after the 2016 Election. *Portal: Libraries and the Academy*, *18*(2), 265–282. <https://doi.org/10.1353/pla.2018.0015>
- Brace, W. (1992). Quality assessment of library and information science school faculties. *Education for Information*, *10*(2), 115–123. <https://doi.org/10.3233/EFI-1992-10204>
- Çoklar, A. N., Yaman, N. D., & Yurdakul, I. K. (2017). Information literacy and digital nativity as determinants of online information search strategies. *Computers in Human Behavior*, *70*, 1–9. <https://doi.org/10.1016/j.chb.2016.12.050>
- Erlinger, A. (2018). Outcomes Assessment in Undergraduate Information Literacy Instruction: A Systematic Review. *College & Research Libraries*, *79*(4), 442–479. <https://doi.org/10.5860/crl.79.4.442>
- Furlan, J. C., & Fehlings, M. G. (2006). A Web-Based Systematic Review on Traumatic Spinal Cord Injury Comparing the “Citation Classics” with the Consumers’ Perspectives. *Journal of Neurotrauma*, *23*(2), 156–169. <https://doi.org/10.1089/neu.2006.23.156>
- Hatlevik, O. E., Throndsen, I., Loi, M., & Gudmundsdottir, G. B. (2018). Students’ ICT self-efficacy and computer and information literacy: Determinants and relationships. *Computers & Education*, *118*, 107–119. <https://doi.org/10.1016/j.compedu.2017.11.011>
- Hsieh, P.-N., Chuang, T.-M., & Wang, M.-L. (2013). A Bibliometric Analysis of the Theses and Dissertations on Information Literacy Published in the United States and

Taiwan. In R.-S. Chang, L. C. Jain, & S.-L. Peng (Eds.), *Advances in Intelligent Systems and Applications—Volume 1* (Vol. 20, pp. 337–348). Springer Berlin Heidelberg. [https://doi.org/10.1007/978-3-642-35452-6\\_35](https://doi.org/10.1007/978-3-642-35452-6_35)

Jones-Jang, S. M., Mortensen, T., & Liu, J. (2021). Does Media Literacy Help Identification of Fake News? Information Literacy Helps, but Other Literacies Don't. *American Behavioral Scientist*, 65(2), 371–388. <https://doi.org/10.1177/0002764219869406>

Julien, H., Gross, M., & Latham, D. (2018). Survey of Information Literacy Instructional Practices in U.S. Academic Libraries. *College & Research Libraries*, 79(2), 179–199. <https://doi.org/10.5860/crl.79.2.179>

Khan, M. L., & Idris, I. K. (2019). Recognise misinformation and verify before sharing: A reasoned action and information literacy perspective. *Behaviour & Information Technology*, 38(12), 1194–1212. <https://doi.org/10.1080/0144929X.2019.1578828>

Kim, S. U., & Lee, Y. G. (2017). Explicating the trends of information literacy studies in the higher education context: A pilot study. *Proceedings of the Association for Information Science and Technology*, 54(1), 724–725. <https://doi.org/10.1002/pr.2017.14505401132>

Kolle, S. R. (2017a). Global research on information literacy: A bibliometric analysis from 2005 to 2014. *The Electronic Library*, 35(2), 283–298. <https://doi.org/10.1108/EL-08-2015-0160>

Kolle, S. R. (2017b). Global research on information literacy: A bibliometric analysis from 2005 to 2014. *The Electronic Library*, 35(2), 283–298. <https://doi.org/10.1108/EL-08-2015-0160>

Kondilis, B. K., Kiriaze, I. J., Athanasoulia, A. P., & Falagas, M. E. (2008). Mapping Health Literacy Research in the European Union: A Bibliometric Analysis. *PLoS ONE*, 3(6), e2519. <https://doi.org/10.1371/journal.pone.0002519>

Koos, J. A. (2019). Bibliometric Analysis Provides a Detailed Map of Information Literacy Literature in the Social Sciences and Humanities. *Evidence Based Library and Information Practice*, 14(4), 177–178. <https://doi.org/10.18438/eblip29628>

Lanning, S., & Mallek, J. (2017). Factors Influencing Information Literacy Competency of College Students. *The Journal of Academic Librarianship*, 43(5), 443–450. <https://doi.org/10.1016/j.acalib.2017.07.005>

Lloyd, A. (2017). Information literacy and literacies of information: A mid-range theory and model. *Journal of Information Literacy*, 11(1), 91. <https://doi.org/10.11645/11.1.2185>

Majid, S., Yun-Ke, C., & Aye, H. N. (n.d.). *Analyzing publishing trends in information literacy literature: A bibliometric study*. 16.

Martzoukou, K., & Sayyad Abdi, E. (2017). Towards an everyday life information literacy mind-set: A review of literature. *Journal of Documentation*, 73(4), 634–665. <https://doi.org/10.1108/JD-07-2016-0094>

Nazim, M., & Ahmad, M. (2007). Research Trends in Information Literacy: A Bibliometric Study (Paper E). *SRELS Journal of Information Management*, 44(1), 53–62. <https://doi.org/10.17821/srels/2007/v44i1/44097>

Pinto, M., Escalona-Fernández, M. I., & Pulgarín, A. (2013). Information literacy in social sciences and health sciences: A bibliometric study (1974–2011). *Scientometrics*, 95(3), 1071–1094. <https://doi.org/10.1007/s11192-012-0899-y>

Pinto, M., Fernández-Pascual, R., Caballero-Mariscal, D., Sales, D., Guerrero, D., & Uribe, A. (2019a). Scientific production on mobile information literacy in higher education: A bibliometric analysis (2006–2017). *Scientometrics*, 120(1), 57–85. <https://doi.org/10.1007/s11192-019-03115-x>

Pinto, M., Fernández-Pascual, R., Caballero-Mariscal, D., Sales, D., Guerrero, D., & Uribe, A. (2019b). Scientific production on mobile information literacy in higher education: A bibliometric analysis (2006–2017). *Scientometrics*, 120(1), 57–85. <https://doi.org/10.1007/s11192-019-03115-x>

Punter, R. A., Glas, C. A. W., & Meelissen, M. R. M. (2016). Discussion and Conclusions. In A. Punter, C. A. W. Glas, & M. R. M. Meelissen, *Psychometric Framework for Modeling Parental Involvement and Reading Literacy* (Vol. 1, pp. 89–93). Springer International Publishing. [https://doi.org/10.1007/978-3-319-28064-6\\_6](https://doi.org/10.1007/978-3-319-28064-6_6)

Scherer, R., Greiff, S., & Kirschner, P. A. (2017). Editorial to the special issue: Current innovations in computer-based assessments. *Computers in Human Behavior*, 76, 604–606. <https://doi.org/10.1016/j.chb.2017.08.020>

Šorgo, A., Bartol, T., Dolničar, D., & Boh Podgornik, B. (2017). Attributes of digital natives as predictors of information literacy in higher education: Digital natives and information literacy. *British Journal of Educational Technology*, 48(3), 749–767. <https://doi.org/10.1111/bjet.12451>

Stopar, K., & Bartol, T. (2019). Digital competences, computer skills and information literacy in secondary education: Mapping and visualization of trends and concepts. *Scientometrics*, 118(2), 479–498. <https://doi.org/10.1007/s11192-018-2990-5>

Tallolli, S. B., & Mulla, K. R. (2011). *A BIBLIOMETRIC ANALYSIS OF JOURNAL OF INFORMATION LITERACY (2011 TO 2015)*. 9.

Tewell, E. (2018). The Practice and Promise of Critical Information Literacy: Academic Librarians' Involvement in Critical Library Instruction. *College & Research Libraries*, 79(1). <https://doi.org/10.5860/crl.79.1.10>

Uribe-Tirado, A., & Alhuay-Quispe, J. (2017). Estudio métrico de ALFIN en Iberoamérica: De la bibliometría a las altmetrics. *Revista Española de Documentación Científica*, 40(3), 180. <https://doi.org/10.3989/redc.2017.3.1414>

Yu, T.-K., Lin, M.-L., & Liao, Y.-K. (2017). Understanding factors influencing information communication technology adoption behavior: The moderators of information literacy and digital skills. *Computers in Human Behavior*, 71, 196–208. <https://doi.org/10.1016/j.chb.2017.02.005>