The Current Research Landscape on the Person with Disabilities (PWDs) Accessibilities on Digital Government: A Bibliometric Analysis

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Abstract
Digital government has become an increasingly important area of research due to its potential to provide public value through enhancing accessibility to information, transparency, and public service delivery. Despite its growing popularity, the adoption and implementation of digital government face challenges, and literature discussing these issues is abundant. However, little research has been done to investigate the accessibility of digital government literature for persons with disabilities (PWDs) in the online Scopus database.

This study utilizes bibliometric analysis to provide an overview of the current research landscape on PWDs' accessibility to digital government. The methodology involves a keyword search of the Scopus online database, with 356 documents selected for further analysis, and standard bibliometric indicators used to report the documents' profiles. The study includes a discussion of document and source types, language of publication, subject area, research trends, distribution of publications by countries, most active source title, citation analysis, top 20 highly cited articles, keywords, and visualization maps.

The findings of the study indicate a growing body of literature on PWDs and digital government, with the highest number of publications in 2021. The United States is the largest contributor to PWDs and digital government research, and the most active source title for digital government research is the ACM International Conference Proceeding Series. The most highly cited article is "The impact of policies on government social media usage: Issues, challenges, and recommendations" by (Bertot et al., 2012).

The study's limitations include the fact that it only examines PWDs' accessibility to digital government studies within the online Scopus database, which may not be representative of all relevant research. Nevertheless, the study provides the first bibliometric analysis of PWDs' accessibility to digital government research in the Scopus database and highlights important research trends that can inform future studies. Further research can explore the accessibility

of digital government literature for PWDs in other databases and investigate potential solutions to enhance PWDs' accessibility to digital government.

Keywords: Digital Government, Person with Disabilities (PWDS), Accessibilities, Bibliometric Analysis

Introduction

The terms e-government and digital government are often used interchangeably to describe the use of technology, specifically information and communication technologies (ICTs), in the delivery of government services and information to citizens. The term "digital government" refers to the use of digital technologies to provide public value as an integral aspect of modernization efforts for governments (OECD, 2014). It is dependent on a digital government ecosystem made up of individuals, corporations, citizens' associations, non-governmental organizations, and government entities that facilitates the creation of and access to data, services, and content through interactions with the government.

The primary goal of digital government is to increase citizen engagement and participation in the democratic process, making it more accessible for all individuals regardless of their physical, cognitive, or socio-economic status. It aims to improve the accessibility, transparency, and efficiency of government services and information, and promote citizen engagement and participation in the democratic process. Digital government initiatives can also enhance the efficiency of government services, reducing costs and wait times for citizens (Bertot et al., 2010).

While digital government initiatives can foster better user-government contact and boost transparency (Alghamdi and Beloff, 2014), a thorough performance assessment is crucial for digital government programme success as it provides insight into how certain projects affect various stakeholders, such as citizens, government workers, businesses, and minorities. In many nations, particularly developing nations, user uptake and usage are far from ideal, and this could result in the failure of digital government, wasting resources and money in the process.

An ample amount of evidence is available discussing the barriers to digital government adoption and initiatives. Of the many barriers or challenges mentioned, digital inclusion is a recurring theme. Most of the exiting digital government research does not focus or discuss person with disabilities (PWDs) considerations for digital government services. In accordance with the Persons with Disabilities Act 2008 (PWD), "PWD, encompass those who suffer from long term physical, mental, intellectual or sensory impairments, preventing their full and effective participation in society when faced with challenges." 'Disability' is a broad term which can refer to many different varieties and degrees of impairment, whether they relate to vision, hearing, speech, mobility, cognition, or psychosocial factors. Following the coronavirus pandemic, when having internet connectivity became essential, digital accessibility increased, but only for those who were physically well and had all five senses intact. However, individuals with disabilities (PWDs) have had to contend with digital tools that do not see them as users, leaving them in the all-too-familiar position of being excluded. There has been a sharp rise in the number of studies about digital government that have been found in a variety of publications, which has drawn the attention of academics and researchers around the world. The literature on electronic government has been extensively

researched and evaluated with a diversity of objectives in view (Heeks & Bailur, 2007; Yildiz, 2007). However, Ahmi and Mohamad (2018) claimed that there are relatively limited attempts to examine the trend of prior works on web accessibility using a bibliometric approach. Napitupulu (2021) asserts that throughout the last ten years, there has been little to no bibliometric evaluation of e-government research as a whole.

Table 1
Summary of some publications on digital government using bibliometric approach

Tittle	Source
A bibliometric analysis of e-government research	Napitupulu, 2021
Bibliometric analysis of Portuguese research in e-government	Dias, 2014
Assessing the impact of smart cities on local e-government research: A bibliometric study	Dias, 2019
Bibliometric study of e-government in Kuwait	Almutairi, Thurasamy, Yeap, & Kadi, 2020

Despite Table 1's bibliometric description of publications on digital government in the Scopus database, there is no bibliometric study that investigates the trend of PWDs' accessibility of digital government research in the online Scopus database. In contrast to the above studies mentioned, this one takes a novel outlook by using bibliometric analysis to examine the accessibility trend for people with disabilities (PWDs) in digital government research. The accessibility of digital governance for people with disabilities (PWDs) has some shortcomings that need to be taken into account. Access, equity, and inclusion of PWDs should be taken into account as the government and society embrace digitization, in line with the creation of the ASEAN Enabling Masterplan 2025: Mainstreaming the Rights of Persons with Disabilities (the Enabling Masterplan). Therefore, it is crucial to comprehend past research as well as research gaps in the existing body of literature to provide the future research of the PWDs accessibility on digital government.

The study sought to accomplish the specific objective which are to discover
- To identify the subject areas or disciplines that contribute to PWDs accessibility on digital government research.
- To identify the trend of PWDs accessibility on digital government research based on the number of publications per year.
- To identify the countries of authors that contribute the most to the publication in digital government research.
- To identify the most active source title that contributes to PWDs accessibility on digital government research.

This study takes on a different perspective by examining the publications trends, its contributions and future research directions. In addition to this, this study is structured as follows: The second section describes the methodology used in this study. Section 3 summarizes the study's main findings. Section 4 discusses the contributions. Section 5 concludes with future research recommendations for researchers.

Methods
Data Source
This bibliometric study utilized the scientific database Scopus to conduct an analysis of publications containing the terms "digital government," "e-government," "government," OR "electronic government" in the title, abstract, or keywords. The study examined all types of papers published in the Scopus database between 2003 and 2021 to provide a comprehensive perspective on the world's research output. Scopus is widely regarded as one of the primary sources of relevant information in the international scientific community, given its status as one of the most important sources of essential data. The study employed bibliometric analysis, which according to Zupic and Cater (2015), involves a quantitative and statistical evaluation of published studies, and is commonly used as a method of conducting a literature review.

Defining Keywords
This research was performed on September 25, 2022, using keywords in the form of search strings relevant to digital government and PWDs where keywords are searched based on the title, keywords, and abstract of the article as follows: (TITLE-ABS-KEY ("digital government" OR "e-government" OR "egovernment" OR "electronic government")) AND (disabilities).

Search Strategy
This study gathers a collection of materials published in digital government using the online Scopus database. Due to its reputation as the largest citation and abstract database in technology, social science, business, and management, Scopus online database was chosen for this study.

Refinement of Search Result
After obtaining the initial results, then researchers conducted a screening of all articles based on the exclusion criteria determined in this research. There are two (2) exclusion criteria used to screen the search results: (i) year 2022 (ii) discontinued coverage in Scopus. The frequency and percentage of the published materials were calculated using Microsoft Excel 2013 to produce the pertinent charts and graphs; the bibliometric networks were created and visualized using VOSviewer (version 1.6.15); and the citation metrics were calculated using Harzing's Publish and Perish software. Table 2 summarizes the amount of all articles obtained after the refinement process.

Table 2
Refinement of Search Result

Search Keyword	Number of Scopus documents
(TITLE-ABS-KEY ("digital government" OR "e-government" OR "egovernment" OR "electronic government")) AND (disabilities) AND (EXCLUDE (PUBYEAR , 2022))	356
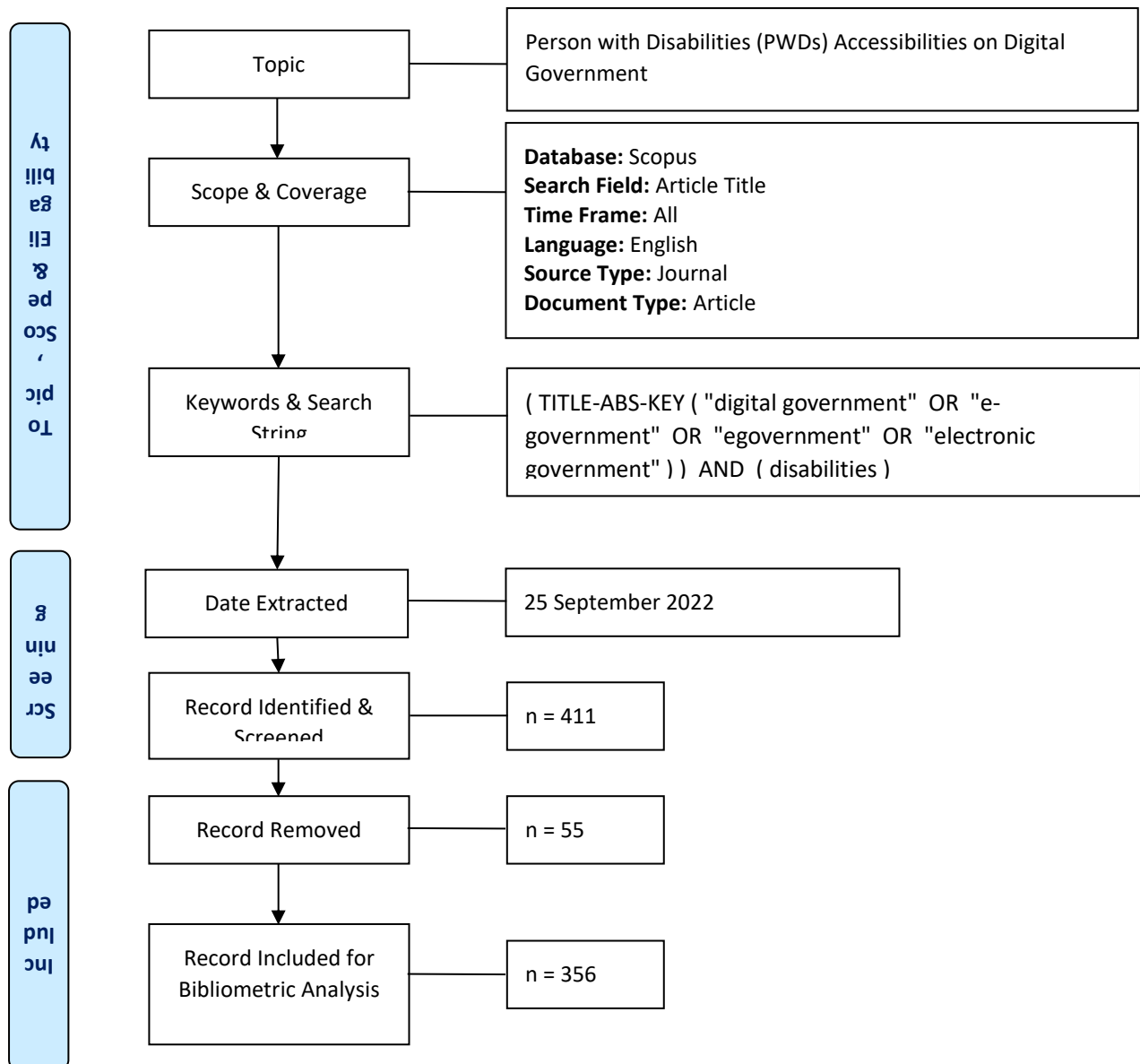
Figure 1. Flow diagram of the search strategy.
Source: Zakaria et al (2020) Worldwide Melatonin Research: A Bibliometric Analysis of the Published Literature between 2015 and 2019, Chronobiology International. https://doi.org/10.1080/07420528.2020.1838534

Modified from PRISMA (Moher D, Liberati A, Tetzlaff J, Altman DG, The PRISMA Group (2009). Preferred Reporting Items for Systematic Reviews and Meta-Analyses: The PRISMA Statement. PLoS Med 6(7): e1000097. doi:10.1371/journal.pmed1000097)

Results
The analysis for the extracted academic work in the search process was based on the following attributes: document and source types, languages of documents, subject area, year of publication, top 10 countries contributed to the publication, most active source titles, citation metrics, top 20 highly cited articles, and keywords analysis.

Documents Profiles

Table 3 presents ten document types. The highest represented type of document is an article with 152 (42.70%), followed by a conference paper with 136 (38.20%). Book chapters also contribute a quite significant number of documents, represented by 43 (12.08 %). Other types of documents with below than 10 publications are book with 9 publications (2.53%), conference review, 6 (1.69%), review, 6 (1.69%) and editorial, 2 (0.56%). The lowest contribution is from note with 1 publication (0.28%).

Table 3
Document Type

Document Type	Total Publications (TP)	Percentage (%)
Article	152	42.70
Conference Paper	136	38.20
Book Chapter	43	12.08
Book	9	2.53
Conference Review	7	1.97
Review	6	1.69
Editorial	2	0.56
Note	1	0.28
Total	**356**	**100.00**

Meanwhile, as Table 4 shows, the documents are classified into four different source types of which the journal represents the highest type of source with 161 documents (45.22%), followed by conference proceedings with 118 documents (33.15%). Books contributed 50 documents (14.04%), and the lowest contribution was from book series with 27 documents (7.58%).

Table 4
Source Type

Source Type	Total Publications (TP)	Percentage (%)
Journal	161	45.22
Conference Proceeding	118	33.15
Book	50	14.04
Book Series	27	7.58
	356	**100.00**

Based on Table 5, only 3 languages had been used in this study. English is the common language used for publications in this research domain with a total number of 346 articles (96.65%). The other languages used for publications in this research are the Portuguese and Spanish languages with 6 publications (1.68%).

Table 5
Languages

Language	Total Publications (TP)*	Percentage (%)
English	346	96.65
Portuguese	6	1.68
Spanish	6	1.68
	358	**100.00**

*one document has been prepared in dual languages

This paper next classifies the published documents based on the subject area as summarized in Table 6. As reported, about 40.45% of the documents examined are from the computer science field, followed by social sciences (29.34%) and business, management and accounting (6.94%). Other subject areas that below 5% of the total publication are mathematics (4.86%), decision sciences (4.34%), engineering (4.17%), economics, econometrics and finance (2.08%), medicine (1.91%), and arts and humanities (1.74%). The distribution indicates that research on digital government also emerged in other subject areas including physics and astronomy, chemical engineering, neuroscience and psychology with little percentage of publications.

Table 6
Subject Area

Subject Area	Total Publications (TP)	Percentage (%)
Computer Science	233	40.45%
Social Sciences	169	29.34%
Business, Management and Accounting	40	6.94%
Mathematics	28	4.86%
Decision Sciences	25	4.34%
Engineering	24	4.17%
Economics, Econometrics and Finance	12	2.08%
Medicine	11	1.91%
Arts and Humanities	10	1.74%
Health Professions	5	0.87%
Physics and Astronomy	5	0.87%
Energy	3	0.52%
Materials Science	3	0.52%
Chemical Engineering	2	0.35%
Environmental Science	2	0.35%
Neuroscience	2	0.35%
Psychology	1	0.17%
Undefined	1	0.17%

Research Trends

Table 7 summarizes the detailed statistics of publications on PWDs and digital government from 2003 to 2021. As per Scopus records, the first published research on PWDs and digital government in 2003 was by McGuire A Conroy (2000). The growth on the related publication was somewhat slow between 2015 (21) and 2017 (17) with 25 and has then risen gradually

from 25 publications in 2020 to 35 publications in 2021. The highest number of publications is observed in 2021, with a total of 35 publications with 50 total citations. The lowest number of publications was in 2003 with a total of 5 publications. In response to The ASEAN Enabling Masterplan 2025, The Marrakesh Treaty to Facilitate Access to Published Works for Persons Who Are Blind, Visually Impaired, or Otherwise Print Disabled, and The National Fiberisation and Connectivity Plan (NFCP), 2019–2023, there have been an increasing number of publications on PWDs and digital government.

Table 7
Year of Publication

Year	TP	Percentage (%)	NCP	TC	C/P	C/CP	*h*	*g*
2021	35	9.59%	22	50	1.43	2.27	4	5
2020	25	6.85%	17	65	2.60	3.82	5	6
2019	24	6.58%	21	74	3.08	3.52	5	6
2018	20	5.48%	16	498	24.90	31.13	11	16
2017	17	4.66%	15	201	11.82	13.40	8	14
2016	15	4.11%	13	173	11.53	13.31	7	13
2015	21	5.75%	18	357	17.00	19.83	6	18
2014	26	7.12%	18	229	8.81	12.72	7	15
2013	25	6.85%	20	251	10.04	12.55	10	15
2012	25	6.85%	23	1142	45.68	49.65	11	23
2011	19	5.21%	16	291	15.32	18.19	7	16
2010	22	6.03%	16	384	17.45	24.00	9	16
2009	20	5.48%	14	653	32.65	46.64	8	14
2008	21	5.75%	19	562	26.76	29.58	12	19
2007	14	3.84%	12	246	17.57	20.50	6	12
2006	12	3.29%	11	987	82.25	89.73	9	11
2005	4	1.10%	4	129	32.25	32.25	3	4
2004	6	1.64%	6	216	36.00	36.00	5	6
2003	5	1.37%	4	663	132.60	165.75	4	4

Notes: TP=total number of publications; NCP=number of cited publications; TC=total citations; C/P=average citations per publication; C/CP=average citations per cited publication; h=h-index; and g=g-index.
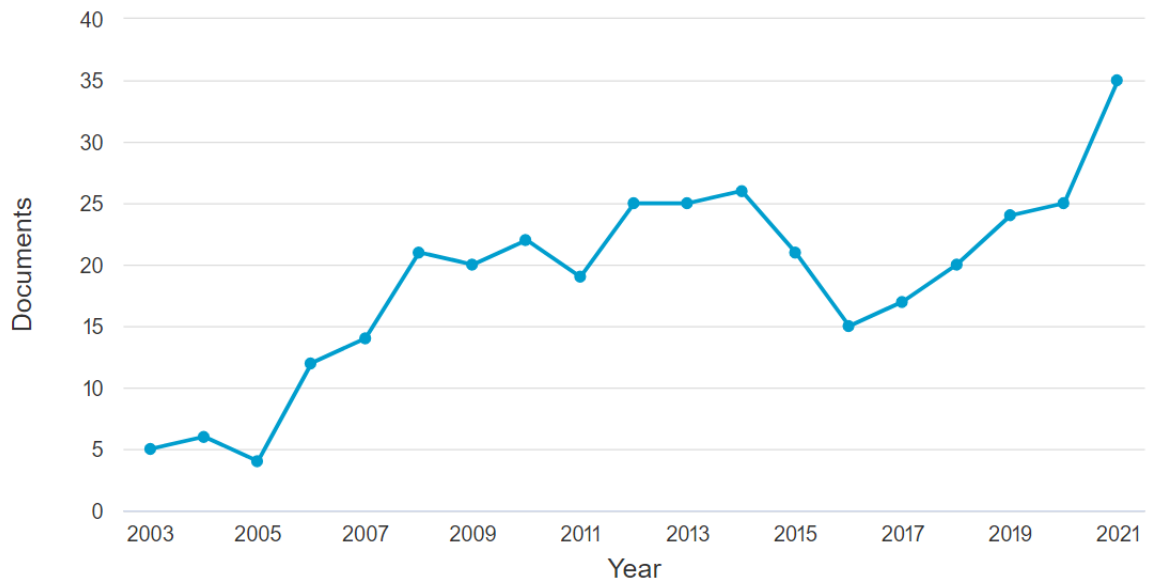
Figure 1. Number of Documents By Year

This study also presents the most active countries that contributed to the publications. Table 8 listed the most active countries with the United States listed as the highest rank with the 78 publications. The United Kingdom and Spain contributed 26 and 23 publications respectively followed by Australia with 22 publications. Brazil and Germany are the countries that contributed to the publications of PWDs and digital government with 16 publications. Among countries with below than 15 publications are Canada (12), Malaysia (12), Greece (11) and South Africa (11).

Table 8
Top 10 Countries Contributed to the Publications

Country	TP	%	NCP	TC	C/P	C/CP	h	g
United States	78	21.91%	69	3332	42.72	48.29	26	57
United Kingdom	26	7.30%	23	356	13.69	15.48	11	18
Spain	23	6.46%	18	299	13.00	16.61	7	17
Australia	22	6.18%	20	453	20.59	22.65	10	20
Brazil	16	4.49%	11	101	6.31	9.18	5	10
Germany	16	4.49%	13	301	18.81	23.15	6	13
Canada	12	3.37%	11	275	22.92	25.00	6	11
Malaysia	12	3.37%	8	99	8.25	12.38	6	8
Greece	11	3.09%	10	67	6.09	6.70	5	8
South Africa	11	3.09%	10	134	12.18	13.40	4	10

Notes: TP=total number of publications; %= percentage of publication; NCP=number of cited publications; TC=total citations; C/P=average citations per publication; C/CP=average citations per cited publication; h=h-index; and g=g-index.

Table 9 highlighted the most active source title on PWDs and digital government. As shown in Table 9, the ACM International Conference Proceeding Series is among the top source titles that contribute 30 publications and ACM is the highest publisher contributing to the publication in Scopus.

Table 9
Most Active Source Title

Source Title	TP	Percentage (%)	Publisher	Cite Score 2021	SJR 2021	SNIP 2021
ACM International Conference Proceeding Series	30	8.22%	ACM	1	0.232	0.31
Government Information Quarterly	26	7.12%	Elsevier	14.5	2.439	3.674
Lecture Notes In Computer Science Including Subseries Lecture Notes In Artificial Intelligence And Lecture Notes In Bioinformatics	20	5.48%	Springer Nature	2.1	0.407	0.534
Electronic Government	13	3.56%	Inderscience Publishers	2.2	0.278	0.607
International Journal Of Electronic Government Research	10	2.74%	IGI Global Publishing	2.4	0.342	0.503
Proceedings Of The European Conference On E Government Eceg	10	2.74%	N/A	N/A	N/A	N/A
Universal Access In The Information Society	10	2.74%	Springer Nature	6.5	0.894	2.015
Proceedings Of The Annual Hawaii International Conference On System Sciences	6	1.64%	N/A	N/A	N/A	N/A
Information Polity	5	1.37%	IOS Press	4.4	0.646	1.286
Information Technology And People	5	1.37%	Emerald	6.6	1.074	1.538

Notes: TP=total number of publications

Citation Analysis
Table 10 summarizes the citation metrics for the retrieved documents as of September 25,2022. The software of Harzing's Publish or Perish was used to find the citation metric for the retrieved data from the Scopus database. The short description contains the number of citations with their citations per year, citations per paper, and citations per author. As indicated, there are 7152 citations reported in 22 years (2003 – 2021) for 356 retrieved articles with an average of 376.42 citations per year.

Table 10
Citations Metrics

Metrics	Data
Papers	356
Number of Citations	7152
Years	19
Citations per Year	376.42
Citations per Paper	20.09
Cites_Author	3941.89
Papers_Author	176.26
Authors_Paper	2.53
h_index	40
g_index	77

Meanwhile, Table 11 showed 20 most cited articles based on the number of times being cited. In addition to total citations reported by Scopus, the table also discloses average number of citations per year. The document entitled "The impact of policies on government social media usage: Issues, challenges, and recommendations" by Bertot, Jaeger, and Hansen (2012) has received the highest number of citations with 524 citations or an average of 52.4 cites per year.

Table 11
Top 20 Highly cited articles

No.	Authors	Title	Year	Cites	Cites per Year
1	Bertot et al	The impact of policies on government social media usage: Issues, challenges, and recommendations	2012	524	52.4
2	Verdegem & Verleye	User-centered E-Government in practice: A comprehensive model for measuring user satisfaction	2009	333	25.62
3	Jaeger & Thompson	E-government around the world: Lessons, challenges, and future directions	2003	323	17
4	Jaeger	The endless wire: E-government as global phenomenon	2003	286	15.05
5	Eppler	Managing information quality: Increasing the value of information in knowledge-intensive products and processes	2006	264	16.5
16	Sandoval-Almazan & Gil-Garcia	Are government internet portals evolving towards more interaction, participation, and collaboration?	2012	220	22

		Revisiting the rhetoric of e-government among municipalities			
7	Phang et al	Senior citizens' acceptance of information systems: A study in the context of e-Government services	2006	219	13.69
8	Gil-Garcia et al	What makes a city smart? Identifying core components and proposing an integrative and comprehensive conceptualization	2015	214	30.57
9	Esteves & Joseph	A comprehensive framework for the assessment of eGovernment projects	2008	164	11.71
10	Bertot & Jaeger	User-centered e-government: Challenges and benefits for government Web sites	2006	146	9.13
11	Pereira et al	Smart governance in the context of smart cities: A literature review	2018	128	32
12	Jaeger	Assessing Section 508 compliance on federal e-government Web sites: A multi-method, user-centered evaluation of accessibility for persons with disabilities	2006	126	7.88
13	Jaeger & Thompson	Social information behavior and the democratic process: Information poverty, normative behavior, and electronic government in the United States	2004	119	6.61
14	Bertot & Jaeger	The E-Government paradox: Better customer service doesn't necessarily cost less	2008	116	8.29
15	Jaeger	Deliberative democracy and the conceptual foundations of electronic government	2005	114	6.71
16	Baker	Advancing E-Government performance in the United States through enhanced usability benchmarks	2009	111	8.54
17	Ganapati & Reddick	Prospects and challenges of sharing economy for the public sector	2018	110	27.5
18	Titah & Barki	E-Government Adoption and Acceptance: A Literature Review	2006	107	6.69
19	Youngblood & MacKiewicz	A usability analysis of municipal government website home pages in Alabama	2012	92	9.2
20	Shi	The accessibility of Chinese local government Web sites: An exploratory study	2007	86	5.73

Keywords Analysis

The present study employed VOSviewer to conduct network visualization analysis of author keywords. Figure 3 depicts a network visualization of the author keywords, where attributes such as color, circle size, font size, and thickness of connecting lines were utilized to represent their relationship with other keywords. The analysis revealed the presence of seven clusters in Scopus, which were developed based on the author keywords. The first cluster, which is colored in red, consists of 19 keywords such as items such as accessibility, accessibility evaluation, accessibility guidelines, accessibility problems, assistive technology, persons with disabilities, and regulatory compliance. The second cluster, which is colored in green, consists of 13 keywords. These include design, e-learning, electronic commerce, government data processing and government information. The third cluster is in blue colour and includes 12 keywords such as adoption, article, case study, decision making, digital government, evaluation, government and human. The fourth cluster which is colored in yellow consists of 12 keywords. These include developing countries, digital divide, digital government adoption, economic and social effects, health care and information services. Cluster five consists of 7 keywords and some of them were digital transformation, government services, public administration, public sector, public services and quality of service. Cluster six consists of 3 keywords which are digital governance, e-participation and local government. The same goes to cluster seven, it also consists of 3 keywords such as public policy, social media and transparency.
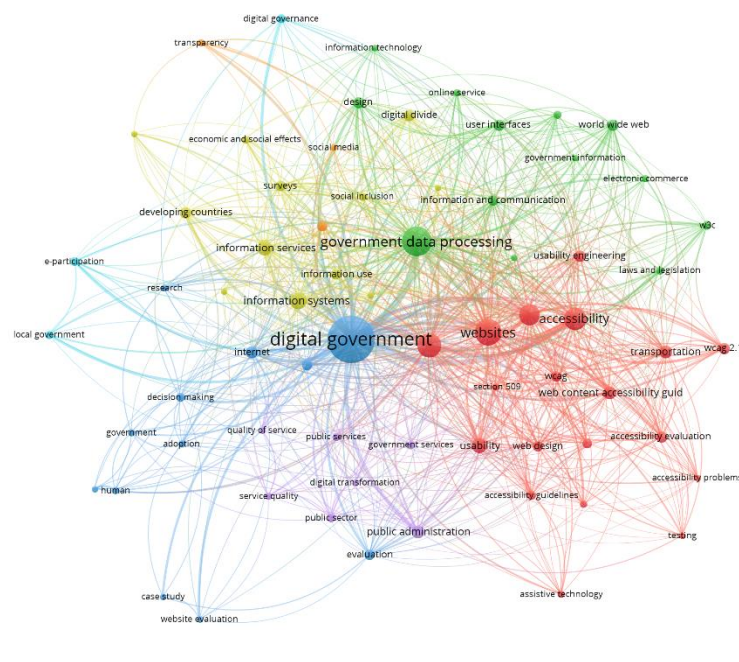

Figure 3. Network visualisation map of the author keywords

Researchers also analyzed the keyword in the spreadsheet document to count the total number of occurrences. Prior to it, data on keywords had been harmonized to ensure consistency in usage. For example, "people with disabilities" and "persons with disabilities" were combined as it represents a similar meaning. Based on the number of occurrences (after conducting data cleaning on the keywords), keywords such as digital government were encountered as the most used keywords in the PWDs and digital government study. Table 12

shows the top 20 keywords in bibliometric search. digital government (62.74%), government data processing (24.93%), websites (20.00%), persons with disabilities (pwds) (17.26%), accessibility (15.07%) and website accessibility (12.60%) are among the keywords with the highest occurrences in Scopus (more than 10.00%). Other keywords with below than 10.00% are information systems, usability, information services, public administration, transportation and web content accessibility guidelines.

Table 12
Top Keywords

Author Keywords	Total Publications (TP)	Percentage (%)
digital government	229	62.74%
government data processing	91	24.93%
websites	73	20.00%
persons with disabilities (pwds)	63	17.26%
accessibility	55	15.07%
website accessibility	46	12.60%
information systems	29	7.95%
usability	25	6.85%
information services	24	6.58%
public administration	18	4.93%
transportation	18	4.93%
web content accessibility guidelines	17	4.66%
internet	16	4.38%
accessibility evaluation	14	3.84%
design	14	3.84%
developing countries	14	3.84%
usability engineering	14	3.84%
wcag 2.1	14	3.84%
world wide web	14	3.84%
digital divide	13	3.56%
user interfaces	13	3.56%
evaluation	12	3.29%
human computer interaction	12	3.29%
information and communication technologies	12	3.29%
information use	12	3.29%
public policy	12	3.29%
surveys	12	3.29%
wcag	12	3.29%
web design	12	3.29%
regulatory compliance	10	2.74%
accessibility guidelines	9	2.47%
digital governance	9	2.47%
decision making	8	2.19%
e-participation	8	2.19%
public sector	8	2.19%

w3c	8	2.19%
economic and social effects	7	1.92%
government services	7	1.92%
laws and legislation	7	1.92%
local government	7	1.92%
public services	7	1.92%
social inclusion	7	1.92%
universal design	7	1.92%
adoption	6	1.64%
assistive technology	6	1.64%
electronic commerce	6	1.64%
government	6	1.64%
human	6	1.64%
online service	6	1.64%
research	6	1.64%
section 509	6	1.64%
service quality	6	1.64%
standards	6	1.64%
transparency	6	1.64%
accessibility problems	5	1.37%
article	5	1.37%
case study	5	1.37%
digital government adoption	5	1.37%
digital transformation	5	1.37%
e-learning	5	1.37%
government information	5	1.37%
health care	5	1.37%
information technology	5	1.37%
quality of service	5	1.37%
service delivery	5	1.37%
social media	5	1.37%
social networking (online)	5	1.37%
testing	5	1.37%
website evaluation	5	1.37%

Discussion

The trends on research on evolution of PWDs and digital government are analyzed in this study by applying a bibliometric analysis method. This study's findings show clearly how digital government appears as an instrument that promotes access to PWDs for acknowledging digitalization. This research gathered data on evolution of PWDs and digital government publications from the Scopus database.

The findings show that research on PWDs and digital governance has been published across a wide range of fields, including computer science, the social sciences, business, management, and accounting. Even if a substantial amount of data is categorized in

numerous other categories, illustrating the variety of perspectives and academic fields utilized to investigate the issue of digital government.

The results of the search indicate a considerable increase in publications since 2003. The data shows that 2021 saw the greatest number of articles on PWDs and digital government. This study also demonstrates that academics from diverse nations collaborate yearly to advocate for the significance of researching PWDs' accessibility to digital governance. The expansion of PWDs and the literature on digital government deliberately demonstrated the awareness of digital government research, which appears to have many advantages for the policy makers, institutions, researchers and government.

As addressed, the research on PWDs and digital government is found to have been most heavily influenced by the United States, followed by the United Kingdom and Spain. Hence, it is shown that numerous research from developed countries have demonstrated the importance of engagement in the digitization process.

The findings show that most publications on digital government were published in the ACM International Conference Proceeding Series, and the most widely cited piece was an article by Bertot et al (2012) titled "The impact of policies on government social media usage: Issues, challenges, and recommendations."

Conclusion

As governments continue to modernize and embrace digital technologies, it is imperative that they prioritize accessibility for all citizens, including those with disabilities. This can be achieved through the development of inclusive digital government strategies and policies, as well as ensuring that all digital platforms and services are designed with accessibility in mind, following established accessibility guidelines and standards. Moreover, governments must also provide appropriate training and resources to government employees involved in the development and implementation of digital services, to ensure that accessibility considerations are fully integrated into their work processes and decision-making. By doing so, governments can ensure that all citizens have equal access to the benefits of digital government and promote greater social inclusion for people with disabilities.

This study highlights the need for continued research and attention to PWD accessibility in digital government, as well as the importance of ongoing efforts to promote disability-inclusive policies and practices in all areas of society. In conclusion, this study provides valuable insights into the growing importance of PWD accessibility in digital government and underscores the need for continued efforts to promote greater accessibility and inclusion for people with disabilities in all aspects of society.

Overall, despite these limitations, this study provides valuable insights into the current state of research on PWD accessibility in digital government and highlights important areas for future research and policy development. Researchers believe that continued research and policy development in this area is crucial to ensuring that digital government initiatives are inclusive and accessible for all members of society, especially those with disabilities. This will ultimately lead to a more equitable society where PWDs have equal access to information and services provided by digital government initiative and to work towards removing barriers that prevent equal access for all individuals.

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References

Ahmi, A., & Mohamad, R. (2018). Examining the trend of published dissertation on web accessibility: A bibliometric analysis. *AIP Conference Proceedings*. http://dx.doi.org/10.1063/1.5055422

Alghamdi, S., & Beloff, N. (2014). Towards a comprehensive model for e-government adoption and utilisation analysis: The case of Saudi Arabia. *Annals of Computer Science and Information Systems*. http://dx.doi.org/10.15439/2014f146

Alghamdi, R., & Beloff, N. (2014). User-centered digital government: A socio-technical perspective. *Government Information Quarterly, 31*(2), S47-S56.

Bertot, J. C., Jaeger, P. T., & Grimes, J. M. (2010). Using ICTs to create a culture of transparency: E-government and social media as openness and anti-corruption tools for societies. *Government Information Quarterly, 27*(3), 264-271.

Hasanah, S., Pratama, I. N., Rahmat, A. F., & Kurniawan, C. (2023). Digital government in social sciences discipline: Mapping pivotal features and proposed theoretical model. *Jurnal Ilmiah Peuradeun, 11*(1), 195. https://doi.org/10.26811/peuradeun.v11i1.819

Heeks, R., & Bailur, S. (2007). Analyzing e-government research: Perspectives, philosophies, theories, methods, and practice. *Government Information Quarterly, 24*(2), 243–265. http://dx.doi.org/10.1016/j.giq.2006.06.005

Napitupulu, D. (2021). A Bibliometric Analysis of E-Government Research. Library Philosophy and Practice.

United Nations. (2019). E-government survey 2020: Digital government in the decade of action for sustainable development. United Nations Public Administration Network. Retrieved from https://publicadministration.un.org/egovkb/en-us/Data-Catalogue/E-Government-Survey-2020

OECD. (2014). Recommendation of the Council on Digital Government Strategies. Retrieved from http://www.oecd.org/gov/digital-government/Recommendation-digital-government-strategies.pdf

Yildiz, M. (2007). E-government research: Reviewing the literature, limitations, and ways forward. *Government Information Quarterly, 24*(3), 646–665. http://dx.doi.org/10.1016/j.giq.2007.01.002

Zakaria, R., Ahmi, A., Ahmad, A. H., & Othman, Z. (2020) Worldwide melatonin research: A bibliometric analysis of the published literature between 2015 and 2019, *Chronobiology International*. https://doi.org/10.1080/07420528.2020.1838534

Zupic, I., & Cater, T. (2013). Bibliometric methods in management and organization: A review. *Academy of Management Proceedings, 2013*(1), 13426. https://doi.org/10.5465/ambpp.2013.13426abstract