

Mapping of Trends and Patterns of Digital Marketing for Student Engagement Using R Bibliometric Tools

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Abstract

R Biblioshiny were used to study the trends and patterns of research on digital marketing for student engagement through bibliometric analysis. Data was collected from Scopus and Web of Science databases for the period of 2017-2026. The study was conducted to understand the evolution of research on the digital marketing for student engagement by examining the research publication patterns, authorship, citation patterns, country contributions, institutional affiliations and occurrences of keywords. The findings revealed that scholarly output on this topic has significantly increased from 2020 which indicates that growing academic interest in student engagement through digital marketing. The main research themes were social media, higher education, e-learning and online interaction. The analysis also revealed the United States, Australia and China as the top contributors in publications and citations. The study shows the growing inclusion of digital technologies, artificial intelligence and social media channels in educational engagement practices. In conclusion, the study offers useful insights into the development, global trends, and future directions of digital marketing research in higher education.

Keywords: R Biblioshiny, Digital Marketing, Publications, trends.

1. Introduction

In today's world, digital marketing has become one of the most powerful tool for improving the student engagement. The rapid growth of technologies such as social media platforms, mobile communication and internet have transformed the process of interacting with the students by the educational institutions. Digital platforms offer opportunities for personalized, faster and interactive engagement. Students are very active on digital channels such as email, blogs, websites, mobile applications and social media making the digital marketing as an important tool for educational institutions. Information pertaining to academic programs, campus activities, ranking and achievements etc. can effectively be communicated to the stakeholders by the universities through digital marketing. Digital marketing also builds strong relationships with existing and prospective students through information sharing and continuous interaction.

Student engagement literally means the level of participation, involvement and the emotional

connections students will develop with their institution and the learning environment. This student engagement is enhanced by creating meaningful communication and interactive experience through digital marketing strategies. Various widely used ways to attract and retain the students are online webinars, virtual campus tours, personalized email and social media campaigns. Digital marketing also helps the institutions in understanding the student behaviour and preferences through data-driven insights and analytics. This will help in designing the communication strategies which will in turn improve the student satisfaction and participation. It encourages two way communication allows the students to ventilate their opinions, give feedback and express concerns. In the present competitive environment, institutions mostly depend on the digital marketing to enhance their brand image and relationships with the students. Artificial intelligence has further enhanced the efficiency. With new technology evolution, Digital marketing will become an essential and indispensable tool for the educational institutions and developing student relationships. Hence, the study of student engaged

through digital marketing is important for understanding how they influence student interaction, satisfaction and institutional success.

Digital marketing includes using a variety of IT technologies and strategies to promote and advertise goods and services, as well as the digital marketing of different goods. It is a new and useful way to market products. It is a very different process from traditional marketing. Digital marketing means using electronic media and different online activities to build and keep a relationship with clients. It includes a number of ways to connect with people online and get leads and sales for our business. Digital marketing is a process that changes all the time, unlike traditional marketing (Wymbs, 2011). Digital marketing works well because it can measure facts, figures, and data. It reduces the number of expedited door-to-door actions. Also, it's a cheap and practical way to talk to other people without disturbing them.

Digital marketing helps the businesses to promote their products, services or brands through electronic channels. Shirisha (2018) identifies alternative terms for digital marketing as "online marketing," "internet marketing," and "web marketing." As defined by The Chartered Institute of Marketing, the digital marketing is a process of management for identifying, executing and meeting the demands of customers satisfactorily. Digital marketing, as defined by Smarter Insights, is the attainment of marketing objectives by digital technologies. The domain of digital marketing is expanding in breadth as the world becomes increasingly digital. This is due to the perception that it is a straightforward, pragmatic, and effective method of learning. Professionals adept in addressing issues related to electronic media are increasingly sought for.

Digital Marketing Platforms: Digital marketing comprises of various tools and techniques which will allow to explore issues in detail are Search Engine Marketing (SEM); Search Engine Optimization (SEO); Social Media Marketing (SMM); Marketing thru Email and Affiliate Marketing.



Source: ChatGPT

Digital marketing platforms play a crucial role in connecting businesses with their target audience in the digital era for promoting products and services effectively. Facebook, LinkedIn and Instagram are the population social media platforms. SEOs and paid advertising are supported by Google. You Tube supports video sharing platforms which helps marketers engage with the stakeholders with visual content. Personalized communication by the companies with the customers is done through Email marketing. Online sale and customer engagement is done through E-commerce platforms integrating digital marketing tools. Digital marketing platforms helps the businesses in measuring campaign performance accurately and also provide real time analytics. These platforms are less expensive and offer global reach when compared with traditional marketing methods. Digital marketing has come in and transformed the way the institutions are interacting with their prospective customers and creating the brand awareness.

2. Literature Review

Systematic Literature Review (SLR) was carried out to extract and review of the publications pertaining only the adoption of Digital Marketing by the Colleges for student engagement. The researcher then looked at all papers in the Web of Science (WOS), Google Scholar and Scopus databases. Scopus and Web of Science are well-known databases.

Satya (2022) asserts that institutions may enhance student enrolment by utilising effective digital marketing strategies. Before institutions invest in digital marketing, it's important to understand its potential benefits. Future research could explore how digital marketing strategies affect colleges and universities. Jha (2023) suggested that digitization has fundamentally changed education, as many people

now use the internet, which has transformed teaching methods. Therefore, schools and universities need to use the internet and other media to reach more students. Today digital marketing is considered the primary way of communication of educational institutions with potential students. These are increasingly incorporated into the field of international education, mainly in order to increase operational effectiveness. Consequently, it is strongly advised that educational institutions should incorporate and adopt these approaches in their organisational structures. The effectiveness of online methods in helping student enrolment has been proven, making digital marketing an important tool for success in competitive environments.

When computers were introduced into the academic domain, it was expected that the entire education system will be revolutionized across the globe. Similar expectations are forecasted in the social media context. The research conducted emphasizes that social media enhances the students learning in higher education environment. It is important to identify the readiness and efficiency of the people to take it to next level implementing the technologies in classrooms. The study was aimed at identifying the feasibility of social media aids in the classrooms. The study was conducted in Tamil Nadu (Vivakaran, 2018).

Karen Sutherland (2020) has investigated the social media application in the pedagogy in the academics. The survey was conducted on 53 academicians in the Australian University indicated that majority of them have used social media for student engagement through sharing information. The results also revealed that there were significant concerns about the privacy and time constraints in using social media.

The research study conducted by (Abbas et. al., 2021). suggested that perceived usefulness, attitude towards using digital marketing and behavioral control of the managers/owners of the startups have significantly impacted positively the behavioural intention to adopt digital marketing. This will helps the companies to enhance their business and give some insights into strategies. The study has contributed significantly towards theoretical aspects.

Social Media helps in connecting learners. The study adopted two models for investigating the factors for student involvement for improving their learning viz., technology acceptance model (TAM) and

constructivism. The objective of the study was to create a model for use of social media for engagement. The survey was conducted on 410 students. The study emphasized that discriminant validity has become accepted as prerequisite for the factors. It also showed that using social media was beneficial. The R-square perceived usefulness was 0.611% and the student engagement was 0.56% and the use of social media was 0.82% (Alalwan 2022).

The study was conducted by Muthmainnah et. al., (2022) to investigate the impact of social medial incorporation into the English instructional material for online learning. Quantitative method was used and investigated the impact. The participants were students of first semester computer sciences at the Universitas Al Asyiah Mandar in Indonesia and the sample size was 40. The results indicated that impact was effective in enhancing students skills and motivation.

The study was conducted to examine the effectiveness of facebook in connecting students. A questionnaire was designed to collect the data from 1670 students in Vietnamese universities. The age group of the students was between 18 and 22 years. The results found that the facebook pages of libraries did not receive good response and interaction. The students acceptance of libraries facebook pages was affected by the social media content and the needs of the students. Few students who have used libraries facebook pages were not very active (Chi, 2022).

The study was conducted to explore the impact of social media engagement on the behavioural intention. The determinants that were included were attitude, subjective norm and perceived behavioural intention of Theory of Planned Behaviour. The conclusive research analysis was followed. The survey was conducted on 210 students from UK higher education. The results indicated that the attitude, subjective norms and perceived behavioural control was impacted by the social media (Konstantoulaki, 2022).

The purpose of the study was to examine the use of social media in the schools for learning, contact, collaboration and participation among the students and teachers., The technology adoption model was used to assess using the determinants such as perceived usefulness, ease of use and behavioral intention. The study was conducted in Nigerian schools and students and teachers participated in the survey.

The intention to use social media was impacted by the usefulness, ease of use and utility (Ajibadem 2023).

3. Methodology

Rowley and Slack (2004) gave the way to do bibliometric analysis. This strategy is supported by several authors of bibliometric studies in different areas (Pinto et. al., 2020; Mahadevan and Joshi, 2021a & 2021b). Bibliometric analysis is employed by researchers to pinpoint emerging trends in article and journal performance, collaboration patterns and research constituents, and to probe the intellectual structure of a specific domain in the existing literature (Donthu et. al., 2021a; Verma and Gustafsson, 2020). The primary focus of bibliometric analysis is on objective data like as publication counts, citation counts and keyword occurrence. Results are interpreted using informed techniques performing objective evaluations (e.g. performance analysis) and subjective assessments (e.g. theme analysis). The bibliometric analysis evaluates and systematically interprets a huge volume of unstructured data in order to map the cumulative scientific knowledge and evolutionary complexity. Therefore, well-conducted bibliometric research can provide a basis for the development of the discipline in a more creative and meaningful way. The study provides experts with a full overview of the issue, identifies knowledge inadequacies, generates or creates novel ideas in research and simulates the desired contributions.

4. Bibliometric Tool

Analysis was performed thorough bibliometric analysis for the purpose of this study using the R program and a package named "biblioshiny." R is an open-source programming language and environment that forms the basis for the capabilities provided in biblioshiny (). This approach was possible because to the pioneering work of Aria and Cuccurullo (2017), and has gained much applause in the field. According to their framework throughout the course of this research three key acts were performed. Firstly, the data collection component contained all the above-mentioned operations, as well as retrieving, loading, converting and cleaning the data. This extremely critical phase ensured that the information was very good and that it maintained its consistency.

The next stage was to do an inclusive data analysis. The analyses comprised both de-scriptive (primary information, trend, etc.) and citation (author, country,

etc.) analyses. The aim was to identify the patterns and trends in the literature that was obtained from well-known databases. In addition, the results were presented more clearly in the data visualisation process by using several graphs provided by the biblioshiny tool. A detailed investigation was conducted using several types of networks, such as conceptual maps and phrase groups, co-occurrence networks, and country-affiliation networks. As Garza-Reyes (2015) mentioned, it was extremely crucial to define the search term, discover the associated articles, polish the results, and gather and clean up fundamental data before going on to the following phases.

5. Search Syntax

The syntax for searching the databases is very important and one of the methodological steps in the bibliometric analysis to ensure extensive search. The selection of the keywords is very important and it provides a unified search over large amount of literature in the selected areas of interest. The literature search was conducted in two popular databases, i.e., Scopus and WoS, using syntax details given in Table 1.

Table 1: Search Syntax

Database	Search Syntax
Scopus (https://www.scopus.com), WoS (https://www.webofscience.com)	TITLE ("digital marketing" OR "social media" OR "online platform*" OR "digital communication" OR "e-marketing") AND ("student engagement" OR "student experience" OR "student interaction" OR engagement) AND (TAM OR "technology acceptance model" OR "behavioral intention" OR "intention to use" OR acceptance OR adoption) AND (university* OR college* OR "higher education")

6. Analysis and Results

An extensive literature study was undertaken. A bibliometric analysis was performed using the Scopus database (<https://www.scopus.com>) and WoS (<https://www.webofscience.com>) to collect data from 2017 to 2025. This study provided a holistic picture of

the topic Adoption of Digital Marketing by colleges for student engagement and the observations are described in the parts below.

Main Information: The "Main Information" serves as the primary component of the bibliometric analysis since it offers details on trends, the quantity of documents, authors, relationships between documents in the research domain, authors of single-authored documents, international co-authorship, and more. Search was made between 2017 to 2026 and the results are presented in table 2, There were 254 documents processed from 195 distinct sources contributed by 1088 authors. 29 documents were authored by a single person. Co-authorship with foreign authors accounted for about 28.35% of the total. Publications have an annual growth rate of 8.59%.

Table 2: Main Information

Description	Results
Timespan	2017:2026
Sources (Journals, Books, etc)	195
Documents	254
Annual Growth Rate %	8.59
Document Average Age	3.27
Average citations per doc	12.65
References	32654
AUTHORS	
Authors	1088
Authors of single-authored docs	28
AUTHORS COLLABORATION	
Single-authored docs	29
Co-Authors per Doc	4.42
International co-authorships %	28.35

Wordcloud: This figure 1 represents key topics from a collection of research articles related to social media. The size of each word indicates how frequently it appears, with larger words showing more important or commonly discussed terms. The most often used phrase, “social media,” implies that the major emphasis of these research is on social media usage. Other big terms like “students,” “humans,” “male” and “female” signal the investigation is looking at distinct groups of the population, especially students and young people. Many studies investigate the use of social media in learning contexts, as shown by the use of terms such as

"education," "higher education," and "e-learning." The use of "questionnaire", "surveys", and "cross sectional study" indicates that the data was acquired by conventional research procedures. health-related phrases like "mental health," "depression," and "psychology" show that the research also consider the effect of social media on well-being. The presence of "COVID-19" and "coronavirus disease 2019" suggests that part of the study was done during the pandemic. Overall, the word cloud indicates that the research covers the effect of social media on students' education, behaviour, and mental health especially in recent years.



Figure 1. Word Cloud

Countries Authored: This bar chart in figure 2 shows the number of research documents produced by authors from different countries. It focuses on the corresponding author's country, meaning the main author responsible for each paper.

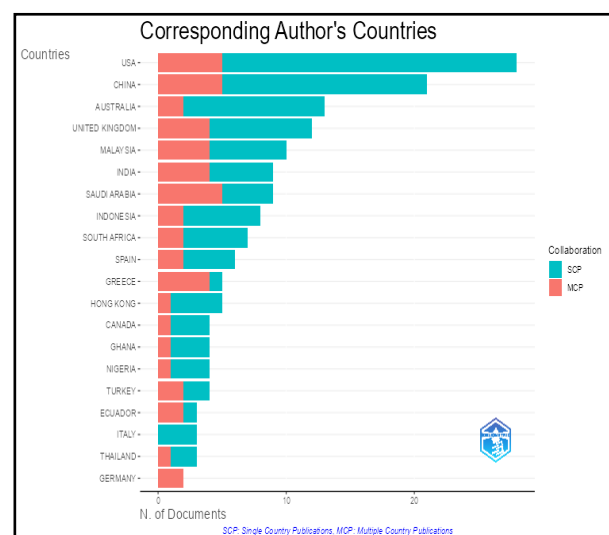


Figure 2. Corresponding Author Countries

The nations are on the vertical axis and the quantity of papers are on the horizontal axis. Search Engine Optimisation (SEO) Each bar is split in two colours, teal (SCP) is for Single Country Publications and red (MCP) is for Multiple Country Publications. SCP = study was

carried out in a single country; MCP = international collaboration between nations. The United States has the largest number of publications, followed by China and Australia. This indicates that these countries are ahead in research output in this sector. A high level of international cooperation is also observed in several nations such as the USA and China, shown by the red segments of the bars. Other nations such as the United Kingdom, Malaysia and India also have moderate numbers of publications. Meanwhile, countries like Ghana, Nigeria and Ecuador have less publications. India has less publications than the major countries like United States, China, Australia and United Kingdom but performs on par with countries like Malaysia and Saudi Arabia. This means that India is a significant contributor, but not a leading producer. As can be seen from the figure, the output of research is generally focused in a few prominent nations, but there is a mixture of autonomous research and international collaboration.

Most Cited Countries: Based on the number of citations received on the topic of student engagement through digital marketing, the countries which have cited the most are presented in table 3.

Table 3: Top 10 Most Cited Countries

Country	Total Citations	Average Article Citations
USA	352	12.6
AUSTRALIA	351	27
SAUDI ARABIA	336	37.3
MALAYSIA	315	31.5
CHINA	244	11.6
HONG KONG	203	40.6
GREECE	182	36.4
INDIA	124	13.8
UNITED KINGDOM	123	10.2
CAMEROON	105	10.5

The highest number of citations of 352 were secured by the United States of America (USA) which indicates the strong academic presence in this research topic. Australia ranked second with 351 citations demonstrating strong research visibility and global recognition. Saudi Arabia ranked third with 336 citations which highlights the country's interest in contributing to global research output. Malaysia has

shown strong impact with 315 citations, while China followed with 244 citations which reflects strong scholarly engagement in this research domain. Hong Kong and Greece secured 203 and 182 citations respectively shows moderate research influence. Among the countries developing, India secured 122 citations shows emerging participation in the research. The United Kingdom received 121 citations. Cameroon with 105 has recorded the lowest citations among the countries. The findings indicated that the developed countries like USA, Australia have dominated in the citation impact. Asia and Middle East are strengthening their research influence rapidly. The pattern indicates growing globalization of research activities and wider collaboration.

Annual Scientific Production: The figure 3 shows the yearly growth trends in the number of research articles published from 2017 to 2026, illustrates the fluctuating trend but increasing pattern over years.

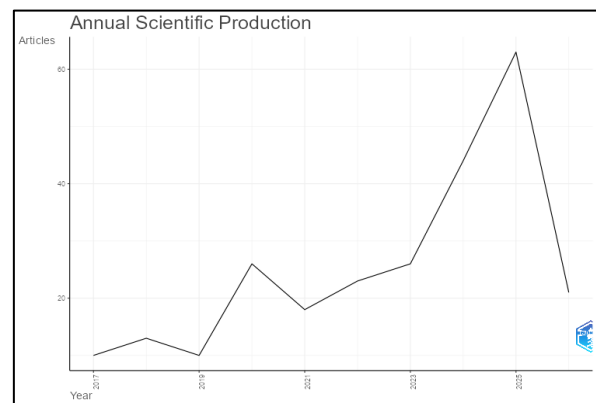


Figure 3. Annual Scientific Production

The number of publications were relatively low in the initial years (2017-2019) ranging between 10 and 13 publications. The production has increased noticeably in the year 2020 where the number of articles published rose sharply to 26 publications. There was a little dip in 2021 but recovered in 2022 and 2023 steadily. Significant increase in the number of publications can be observed between 2023 and 2025 with the highest number of 60 publications in 2025. This increase reflects the increasing trend in the research interest and scholarly contribution of articles. The graph shows the dip in 2026 which is because of incomplete annual data collection. The trend demonstrates a significant growth in productivity over the years highlighting the importance of the research contribution in the concerned domain.

Average Citations Per Year: The figure 4 titled “Average Citations per Year” illustrates the trend in the average number of citations received by publications over the study period from 2017 to 2026. The graph reflects variations in the impact and recognition of research articles across different years.

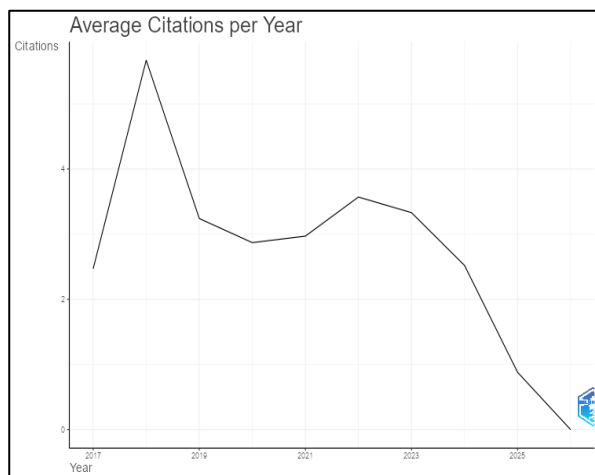


Figure 4. Average Citations per year

The average citations began at a moderate level of around 2.5 citations in 2017 and increased sharply to the highest point of nearly 5.5 citations in 2018. This indicates that the publications produced during 2018 received comparatively greater academic attention and scholarly recognition. Following this peak, the average citations showed a gradual decline from 2019 onwards, fluctuating between approximately 2.8 and 3.6 citations until 2023. This suggests a relatively stable citation performance during these years. However, from 2024 onwards, the graph reveals a steep decrease in citation averages, dropping below 1 citation by 2025 and approaching zero in 2026. The declining trend in the most recent years may not necessarily indicate lower research quality, but could be attributed to the shorter time available for recently published articles to accumulate citations. Since citations generally increase over time, newer publications often show lower citation counts compared to older publications.

Most Relevant Affiliations: The table 4 illustrates the most relevant affiliations of the institutions based on the number of articles published on the topic of student engagement through digital marketing. The results highlights that leading universities contribute more significantly in this field of research.

Table 4: Most Relevant Affiliations

Affiliation	Articles
DEAKIN UNIVERSITY	11
MINISTRY OF NATIONAL GUARD-HEALTH AFFAIRS	9
AGA KHAN UNIVERSITY	5
KING FAISAL UNIVERSITY	5
THE OHIO STATE UNIVERSITY	5
BINA NUSANTARA UNIVERSITY	4
CAIRO UNIVERSITY	4
DONGBEI UNIVERSITY OF FINANCE AND ECONOMICS	4
QUEEN MARY UNIVERSITY OF LONDON	4
UNIVERSITI MALAYA	4
UNIVERSITI TEKNOLOGI MALAYSIA	4
UNIVERSITY OF ALICANTE	4
UNIVERSITY OF CALIFORNIA	4
UNIVERSITY OF GHANA	4
UNIVERSITY OF NEW SOUTH WALES	4
UNIVERSITY OF RWANDA	4
UNIVERSITY OF TORONTO	4
UNIVERSITÉ DE MONTRÉAL	4

Deakin University with 11 articles on this topic has emerged as the most productive institution which indicates strongly involvement and academic contribution. Second in the table is the Ministry of National Guard-Health Affairs with 9 publications shows notable contribution in healthcare sector. Aga Khan University, King Faisal University and The Ohio State University have contribution 5 publications each showing moderate but consistent productivity. 4 publications each were contributed by universities such as Bina Nusantara University, Dongbei University of Finance and Economics, Queen Mary University of London, Universiti Malaya, Universiti Teknologi Malaysia, Universit of Alicante, University of California, University of Ghana, University of New South Wales, University of Rwanda, University of Toronto and Universite de Montreal indicating growing international participation in the research area.

The results have indicated that the research contributions are diverse in geographical nature involving institutions from Europe, Middle East, Asia,

Australia and North America showcasing the global collaboration and interdisciplinary interest on this topic.

7. Conclusion

The study focussed on the student engagement using digital marketing highlights the increasing importance of the digital platforms in the education sector. The bibliometric analysis has shown that a significant increase in publication on this topic from 2017 to 2026 which indicates the growing interest in the academicians on this domain. The themes that have emerged as most dominating are social media, student engagement and online learning etc. The findings from the analysis have shown that digital marketing helps the institutions improve the communication between stakeholders, interaction and student preparation more effectively than traditional marketing. The countries such as United States of America, Australia and China have contributed more research output on this topic. The study also indicated the role of artificial intelligence, social media, e-learning in enhancing the student experience. The trends have shown interdisciplinary integration among the education, psychology, communication studies and technology. The study further revealed the importance of international collaboration in increasing the research quality and more visibility. Overall, the digital marketing today has become one of the important tools for strengthening institutional branding, engagement practices and student satisfaction in higher education. The study finally concludes that growth of educational institutions and competitiveness will increase with the adoption of digital marketing strategies.

References

- [1] Alalwan N. (2022). Actual use of social media for engagement to enhance students' learning. *Education and Information Technologies*, vol. 27, NO.7, pages 9767-9789.
- [2] Muthmainnah; Obaid A.J.; Al.mahdawi R.S.; Khalaf H.A. (2022). Adoption Social Media-Movie Based Learning Project (SMMBL) To Engage Students' Online Environment. *Educational Administration: Theory and Practice*, vol. 28, no.1, pages 22-36.
- [3] Chi D.T.P. (2022). Exploring Student Engagement on Library Facebook Pages: A Survey of Vietnamese Academic Libraries. *Journal of Information Science Theory and Practice*, vol. 10, no.2, pages 17-29.
- [4] Konstantoulaki K.; Rizomyliotis I.; Cao Y.; Christodoulou I. (2022). Social media engagement and the determinants of behavioural intentions of university online programme selection: the moderating role of mindfulness. *Corporate Communications*, vol. 27, no.3, pages 457-469.
- [5] Ajibade S.-S.M.; Zaidi A. (2023) Technological Acceptance Model for Social Media Networking in e-Learning in Higher Educational Institutes. *International Journal of Information and Education Technology*, vol. 13, no.2, pages 239-246.
- [6] Abbas, A., & Mehmood, K. (2021). Understanding Digital Marketing Adoption in India: Integrated by Technology Acceptance Model (TAM) and Theory of Planned Behaviour (TPB) Framework. *Journal of Management Sciences*, 8 (2), 70-87.
- [7] Karen Sutherland, Uwe Terton, Cindy Davis, Christina Driver, and Irene Visser (2020). Academic Perspectives and Approaches to Social Media Use in Higher Education: A Pilot Study. *International Journal of Teaching and Learning in Higher Education*, Vol. 32. No.1. Pp. 1-12.
- [8] Vivakaran M.V.; Maraimalai N. (2018). The feasibility and acceptance of social media interventions in higher education classrooms of developing nations with special reference to india. *Contemporary Educational Technology*, Vol. 9, NO.3, pages 284-296.
- [9] Satya, S. 2022. Digital marketing strategies for educational institutes in 2022.
- [10] <https://www.kraftdigi.com/top-10-digital-marketing-strategies-for-educational-institutes-in-2022/>
- [11] Shirisha, M. 2018 Digital Marketing Importance in the New Era. *International Journal of Engineering Technology Science and Research*. 51, 612–617.
- [12] Wymbs, Cliff. 2011. "Digital Marketing: The Time for a New 'Academic Major' Has Arrived." *Journal of Marketing Education* 33, no.1, pp. 93-106. <https://doi.org/10.1177/0273475310392544>
- [13] Garza-Reyes JA (2015). Lean and green—a systematic review of the state of the art literature. *J Clean Prod* 102:18–29.
- [14] Mahadevan K, Joshi S (2021a). A bibliometric analysis of trends in electronic service quality research over two decades. *Int J Integr Supply Manag* 14(2):131–166

- [15] Mahadevan K, Joshi S (2021b). Omni channel retailing: a bibliometric and network visualization analysis. *Benchmarking Int J* 29(4):1113–1136.
- [16] Pinto G, Rastogi S, Kadam S, Sharma A (2020). Bibliometric study on dividend policy. *Qual Res Financ Mark* 12(1):72–95.
- [17] Rowley J, Slack F (2004). Conducting a literature review. *Manag Res News* 27(6):31–39.
- [18] N. Donthu, S. Kumar, N. Pandey, W.M. Lim (2021a). Research constituents, intellectual structure, and collaboration patterns in *Journal of International Marketing: An analytical retrospective*. *Journal of International Marketing*. doi: 10.1177/1069031X211004234
- [19] S. Verma, A. Gustafsson (2020). Investigating the emerging COVID-19 research trends in the field of business and management: A bibliometric analysis approach. *Journal of Business Research*, 118 (2020), pp. 253-261
- [20] Aria M, Cuccurullo C (2017). Bibliometrix: An R-tool for comprehensive science mapping analysis. *J Informet* 11(4):959–975.
- [21] Scopus <https://www.scopus.com>,
- [22] WoS <https://www.webofscience.com>
- [23] www.chatGPT.com