

Mapping the Intellectual Structure of Digital Entrepreneurship Field with Strategic Diagram

Cigdem Baskici¹ and Yunus Gokmen²

¹Department of Healthcare Management, Faculty of Health Sciences, Başkent University, Ankara, Türkiye

²Department of Public Relations and Publicity, Faculty of Communication, Başkent University, Ankara, Türkiye

cbaskici@baskent.edu.tr

yunusgokmen@baskent.edu.tr

Abstract: The convergence of digital technologies and entrepreneurship has given rise to a new phenomenon known as digital entrepreneurship. Despite growing interest, limited research has explored the intellectual structure and trends within this field. To address this gap, this study aims to map the intellectual structure and trends in digital entrepreneurship field utilizing co-word analysis. The authors searched for English-language articles published between 2006 and 2024 in the Web of Science Core Collection and Scopus databases, using the key phrase 'digital entrepreneur*'. 311 unique keywords were identified and clustered into eight groups via modularity clustering. A two-dimensional map based on cluster density and centrality reveals four cluster types: central and developed, peripheral and developed, peripheral and underdeveloped, central and underdeveloped—offering insights into the field's evolving intellectual landscape.

Keywords: Digital Entrepreneurship, Intellectual Structure, Co-word Analysis, Strategic Diagram, Mapping

1. Introduction and Theoretical Background

Digital technologies, considered one of the most influential and disruptive developments since the Industrial Revolution, have significantly reshaped the world (Dana et al, 2024). The widespread adoption of digital technologies and the availability of internet infrastructure everywhere have enabled the emergence of a new type of entrepreneurship called digital entrepreneurship (Abubakre et al, 2021). Digital entrepreneurship is seen as a new model that integrates digital technologies with entrepreneurial opportunities (Li et al, 2024). As a form of entrepreneurship that deeply changes economic growth, the shape of real economies, and the structure of industries (Liu et al, 2024) it has become increasingly important today and continues to attract attention as a current topic in both practice and research (Kollmann et al, 2022).

Considering the growth and importance of this field, it is crucial to understand the current state and emerging trends of digital entrepreneurship. Dana et al (2023) presented a quantitative mapping of digital entrepreneurship through a bibliometric analysis of its publications. They found the field of digital entrepreneurship to be rather lively and in rapid development. Lungu et al (2024) mapped the field of digital entrepreneurship through a systematic and integrative review of research published between 1989 and February 2023 in the Web of Science, using both quantitative and qualitative methods. Liu et al (2025) adopted bibliometric and content analysis methodologies to systematically examine the field of digital entrepreneurship. Their results revealed a recent surge in interest in digital entrepreneurship, highlighting its significant potential. Although research on the development and evolution of digital entrepreneurship field is growing, it remains evident that further in-depth studies are required to advance the field. Especially investigating the thematic clusters in this field and analysing the maturity of the subject are essential steps. To address this gap, this study aims to map the intellectual structure and trends in digital entrepreneurship field utilizing co-word analysis. The following sub-research questions were addressed:

Q1. How is the intellectual structure of digital entrepreneurship field analysed in terms of top co-word pairs, co-occurrence matrix, and modularity clustering?

Q2. How are the clusters of digital entrepreneurship field visualized and analysed by the strategic diagram in terms of density and centrality of clusters?

To achieve the aim and answer the sub-questions, English-language articles published between 2006 and 2024 in the Web of Science Core Collection and Scopus databases were identified using the key phrase 'digital entrepreneur*'. A co-word matrix was generated based on the co-occurrence frequency of the keywords. Applying modularity clustering to this matrix resulted in eight clusters representing the intellectual structure of the literature for the period 2006–2024. Additionally, a two-dimensional map was created to visualize the structure of these clusters, considering both their density and centrality. This analysis allowed to identify four

types of clusters: central and developed, peripheral and developed, peripheral and underdeveloped, central and underdeveloped.

2. Methodology

Co-word analysis is used to explore a research topic a given research field through the co-occurrence of keywords extracted from the corpus of documents (Cobo et al, 2011; Hosseini et al, 2025). Co-word analysis has two assumptions: first, that the keywords used in a document are carefully selected by its author and accurately reflect the document's meaning and content; second, that the co-occurrence of two keywords in different documents indicates a correlation (Feng et al, 2017). Co-word analysis is based on the principle that the co-occurrence of keywords reflects the content of documents. This technique allows researchers to identify distinct research areas in specific disciplines (Callon et al, 1991). It also helps to uncover significant and hidden patterns, explore internal and external relationships between concepts, and detect emerging trends (Hosseini et al, 2025). Therefore, a co-word analysis was conducted to identify the intellectual structure and trends within digital entrepreneurship field.

In this research, the first step was to extract keywords from English-language articles published between 2006 and 2024 in the Web of Science Core Collection and Scopus databases. The second step involved generating a co-word matrix based on the co-occurrence frequency of the keywords. The third step included building a modularity cluster (Blondel et al, 2008) and measuring the density and centrality of each cluster in order to create a strategic diagram. Figure 1 indicates four areas of strategic diagram include (Soriano-Pinar et al, 2023; Han et al, 2013):

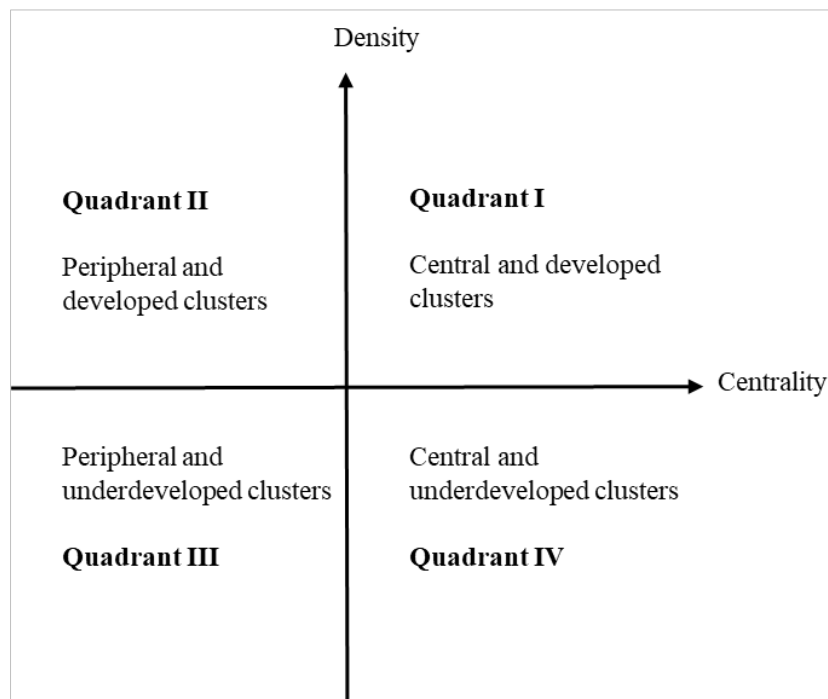


Figure 1: Strategic diagram and characterization of clusters

- Central and developed clusters represent the driving themes of the field, which are well developed and important for its structure. These themes define the focus and emphasis of the research field.
- Peripheral and developed clusters represent the themes that are well developed but are of only marginal importance for the field. These themes are very specialized and peripheral in character.
- Peripheral and underdeveloped clusters represent the themes that are unstructured and weakly developed. Themes represent either emerging or disappearing topics.
- Central and underdeveloped clusters represent the themes that are underdeveloped but have the potential to become core and promising lines of research.

2.1 Data Collection and Pre-processing

In co-word analysis, after selecting a research area, keywords are extracted from relevant journal articles or other publications. A co-occurrence matrix is then constructed, where each cell value indicates the frequency with which two keywords appear together.

The authors searched for English-language articles published between 2006 and 2024 in the Web of Science Core Collection and Scopus databases, using the key phrase ‘digital entrepreneur*’ to query the fields of Title, Abstract, and Author Keywords. A total of 399 articles were retrieved from the Web of Science database and 468 articles from Scopus database. After manually filtering out duplicates and irrelevant articles (214), articles with no keywords or one keyword (29), and articles with two keywords (2), 622 articles and 3,451 keywords were obtained (Figure 1).

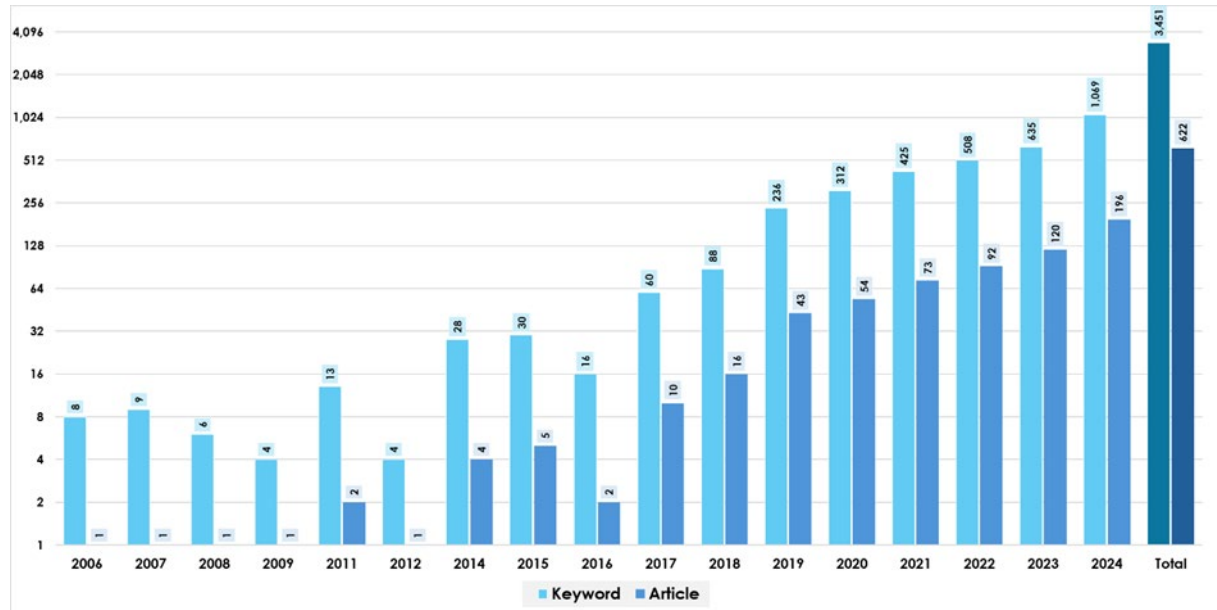


Figure 2: The number of keywords and articles covering the term of 2006-2024

Note: Logarithmic 2 scale is used. N (Keyword)=3,451, N (Article)=622

A total of 3,451 keywords were analysed, 1,539 of which were identified as unique. Based on Bradford’s Law (Angamma and Jayatissa, 2015; Khasseh et al, 2017), thresholds were defined using co-occurrence frequency of the keywords. A total of 311 unique keywords with a co-occurrence frequency of ≥10 were selected for the final analysis, representing Zones 1 and 2 and accounting for 62% of the total keyword co-occurrence.

2.2 Data Analysis

A co-word matrix was formed based on the co-occurrence frequency of the 311 unique keywords. The clusters were then identified using modularity clustering in Gephi 0.10.1 (Bastian et al., 2009). Afterward, a separate co-occurrence matrix was constituted for each cluster. Finally, the density and centrality of each cluster were measured by using UCINET 6.801 (Borgatti et al, 2002) and strategic diagram was drawn.

3. Results

The list of top thirty keywords according to the frequency and co-occurrence frequency is presented in Table 1.

Table 1: The top thirty keywords of frequency and co-occurrence frequency

ID	Frequency		Co-occurrence Frequency	
	Keywords	f	Keywords	f
1	Digital entrepreneurship	305	Digital entrepreneurship	1,408
2	Entrepreneurship	97	Entrepreneurship	500
3	Digitalization	45	Digitalization	230
4	Digital transformation	40	Digital transformation	207
5	Digital technology(ies)	36	Digital technology(ies)	187

ID	Frequency		Co-occurrence Frequency	
	Keywords	f	Keywords	f
6	Digital entrepreneur(s)	31	Innovation(s)	166
7	Digital entrepreneurial ecosystem(s)	31	Digital entrepreneur(s)	145
8	Innovation(s)	30	Digital innovation(s)	144
9	Digital innovation(s)	28	Startup(s)	136
10	Startup(s)	27	Digital entrepreneurial ecosystem(s)	130
11	Social media	25	Social media	120
12	Digital entrepreneurial intention(s)	24	Entrepreneurial ecosystem(s)	119
13	Entrepreneurial ecosystem(s)	24	Digital economy	108
14	Digital startup(s)	23	Digital platform(s)	106
15	Digital economy	22	COVID-19	100
16	Digital platform(s)	22	Digital entrepreneurial intention(s)	98
17	COVID-19	20	Digital startup(s)	93
18	Technology	19	Technology	91
19	SMEs	18	China	89
20	Artificial intelligence (AI)	17	Ecosystem(s)	89
21	China	17	Artificial intelligence (AI)	88
22	Ecosystem(s)	17	SMEs	86
23	Entrepreneurial intention	17	Digital	82
24	Bibliometric analysis	16	Business model(s)	77
25	Business model(s)	15	Entrepreneurial intention	75
26	Case study	15	Case study	72
27	Digital	15	Theory of planned behaviour	71
28	Theory of planned behaviour	15	Data	70
29	Women entrepreneurship	15	Internet	68
30	Network(s)	13	Women entrepreneurship	68

Scrutinizing the results in Table 1, the frequency ranks from the first to the fifth belonged to Digital entrepreneurship (305), Entrepreneurship (97), Digitalization (45), Digital transformation (40) and Digital technology(ies) (36), respectively. As shown in Table 1 the co-occurrence frequency ranks from the first to fifth belonged to Digital entrepreneurship (1408), Entrepreneurship (500), Digitalization (230), Digital transformation (207) and Digital technology(ies) (187), respectively.

Table 2 shows the results of the modularity clustering with the keywords contained in each cluster. 311 keywords were divided into eight clusters. Keywords in each cluster reflect the corresponding research topics, as well as the research directions of digital entrepreneurship field. As the biggest cluster, Cluster1 comprises 142 keywords. As the smallest clusters, Cluster7 comprises 3 keywords.

Table 2: The cluster of the keywords

Cluster ID	Number of Keywords	Keywords	Most Important First Three Keywords in the Clusters (Degree)
1	142	Academic entrepreneurship, Agent-based analysis model, Automotive industry, Beijing, Bibliometric analysis, Born digitals, Bricolage, Business development, Business model canvas, Business model change, Business model innovation, Business model(s), Capability(ies), Case study, City(ies), Co-creation, Community(ies), COVID-19, Creativity, Crowdfunding, Cyberpreneurship, Data, Decision making, Demand-side perspective, Digital business(es), Digital capability, Digital competency(ies), Digital disruption, Digital economy, Digital entrepreneurship, Digital environment, Digital innovation ecosystem, Digital innovation(s), Digital marketing, Digital platform(s), Digital services, Digital skills, Digital startup(s), Digital strategy, Digital technology(ies), Digital transformation, Digital venture(s), Digitalization, Digitization, Disruptive innovation, Disruptive technology(ies), Dynamic capability(ies), Economic disruption, Economic growth, Education, Effectuation, Emerging market(s), Emerging technology(ies), Entrepreneurial agility, Entrepreneurial alertness, Entrepreneurial behaviour, Entrepreneurial finance, Entrepreneurial firm(s), Entrepreneurial intention, Entrepreneurial journey, Entrepreneurial marketing, Entrepreneurial orientation, Entrepreneurial passion, Entrepreneurial process, Entrepreneurialism, External enabler(s), Financing, FSQCA, Gig economy, Globalization, Growth, Guanxi, Handicrafts, Higher education, India, Industry 4.0, Informal economy, Information, Information and communication technology, Innovation(s), Innovativeness, Institutional theory, International business, International entrepreneurship, Internationalization, Internet startup(s), Labour, Latin America, Lean startup(s), Literature review, Management, Mobile applications, Music entrepreneurship, Neoliberalism, Network(s), New venture(s), Nigeria,	Digital entrepreneurship (522), Digitalization (172), Digital technology(ies) (150)

Cluster ID	Number of Keywords	Keywords	Most Important First Three Keywords in the Clusters (Degree)
		OECD, Opportunity recognition, Pivoting, Platform economy, Platform(s), Policy(ies), Proactiveness, Process model, Quality, Research and development, Resource-based theory, Risk taking, Science, Self-efficacy, Sharing economy, Small business(es), SMEs, Social capital, Social entrepreneurship, Social media platforms, Social network(s), Social sustainability, Socioeconomic, South Africa, Stakeholder, Startup(s), Strategy(ies), Structural equation modeling, Sustainability, Sustainable entrepreneurship, Sustainable performance, Systematic literature review, Technological innovation, Technology, Technology acceptance model, Technology affordance theory, Training, Unicorns, Value proposition, Venture capital, Virtual reality, Vosviewer, Wechat, Women entrepreneur(s), and Women entrepreneurship	
2	20	Africa, Big data analytic(s) capabilities, Central and Eastern Europe, Creative industries, Digital ecosystem(s), Digital entrepreneurial ecosystem(s), Digital entrepreneurial orientation, Digital organizational culture, Digital society, Entrepreneurial ecosystem(s), Entrepreneurial opportunity(ies), Financial inclusion, Fintech(s), Ghana, Human capital, Incubator(s), Leadership, Mobile money, Transnational digital entrepreneurship, and Value creation	Entrepreneurial ecosystem(s) (104), Digital entrepreneurial ecosystem(s) (80), Digital ecosystem(s) (44)
3	42	Attitudes, Blockchain, ChatGPT, Continuance intention, Digital entrepreneur(s) competency(ies), Digital entrepreneurial behavior, Digital entrepreneurial intention(s), Digital entrepreneurial knowledge, Digital entrepreneurial opportunity(ies), Digital entrepreneurial self-efficacy, Digital entrepreneurship education, Digital literacy, Digital social entrepreneurship, Electronic word of mouth, Emerging economies, Entrepreneurial knowledge, Entrepreneurial learning, Entrepreneurial self-efficacy, Entrepreneurship education, Family business, Indonesia, Intention, IT-enabled capabilities, Jordanian, Malaysia, Massive open online course(s), Moderated mediation model, Perceived behavioural control, Perceived ease of use, Perceived usefulness, Performance expectancy, Personality trait(s), Resilience, Saudi Arabia, Social cognitive career theory, Student(s), Subjective norms, Theory of planned behaviour, Uncertainty, University students, User satisfaction, and Youth(s)	Digital entrepreneurial intention(s) (80), Entrepreneurship education (60), Saudi Arabia (60)
4	7	Business innovation, Business performance, Crisis, Cultural and creative industry(ies), Digital adoption, Music industry, and Russia	Business innovation (18), Crisis (18), Digital adoption (18)
5	82	Algorithms, Application, Artificial intelligence (AI), Barriers, Big data, Business, China, Cluster(s), Communication, Competitiveness, Creative labour, Crowdsourcing, Culture, Customer behaviour, Cyberfeminism, Cybertraders, Definitions, Developing countries, Digital, Digital enterprise, Digital entrepreneur(s), Digital labour, E-business, E-commerce, E-entrepreneurship, Egypt, Electronic commerce, Enterprise, Entrepreneur(s), Entrepreneurship, Ethnography, European Union, Facebook, Feminist theory, Framework, Gender, Generation Z, Healthcare, High-quality development, Influencer(s), Informal sector, Institutions, Internet, Internet of things, Intersectionality, Italy, Kuaishou, Machine learning, Metaverse, Micro small and medium-sized enterprises, Microenterprises, Migration, Modeling, Online business, Online entrepreneurship, Online platform(s), Open innovation, Opportunity(ies), Parasocial interaction theory, Performance, Productive entrepreneurship, Professionalization, Purchase intentions, Qualitative method(s), Regression analysis, Skill(s), Smart city(ies), Social media, Social media influencers, Sport(s), Success factors, Sustainable development, Sustainable development goals, Technology entrepreneurship, Text analysis, Tourism, Trust, University(ies), Virtual enterprise, Web, Women, and Youtube	Entrepreneurship (292), Digital entrepreneur(s) (122), Social media (96)
6	7	Digital citizenship, Digital governance, Digital infrastructure, Ecosystem(s), Information technology(ies), Matchmakers, and Multisided platforms	Ecosystem(s) (86), Information technology(ies) (38), Multisided platforms (28)

Cluster ID	Number of Keywords	Keywords	Most Important First Three Keywords in the Clusters (Degree)
7	3	Innovative education, Online courses, and Online education and training	Innovative education (12), Online courses (12), Online education and training (12)
8	8	Home-based business, Homeworking, Identity, Liminality, Live streaming, Persons with disabilities, Remote work, and Self-employment	Identity (24), Home-based business (22), Liminality (18)
Total	311		

Figure 2 shows a strategic diagram generated according to the centrality and density of clusters. This reveals the status and trends of current digital entrepreneurship field by dividing the eight clusters into four quadrants. In the strategic diagram, the horizontal axis reflects the centrality of the clusters, representing the strength of interaction between the analysed clusters. The higher a centrality of cluster, the more essential and central its position. The vertical axis shows the density of clusters, representing their own internal relations. The greater the density of a cluster, the greater its capacity to maintain and develop itself (Liu et al, 2012; Khasseh et al, 2017).

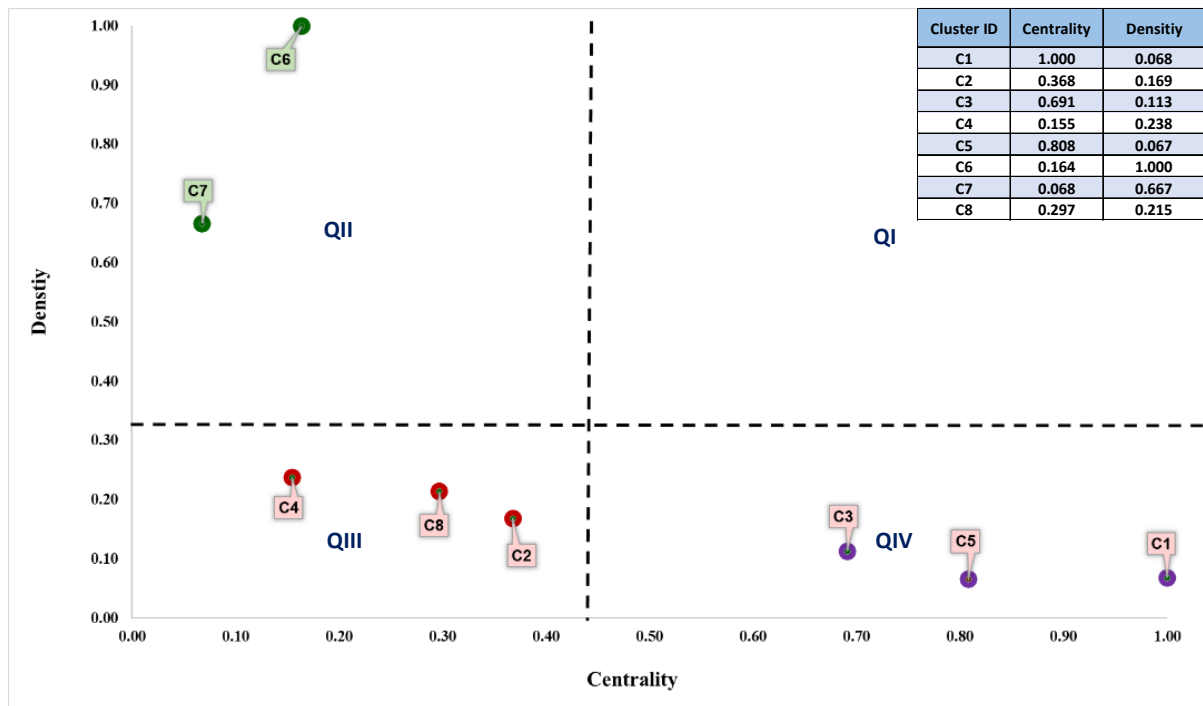


Figure 2: Strategic diagram of the eight clusters

Note: The mean values ($x = 0.444$, $y = 0.317$) were used to plot the lines of the strategic quadrants that intersect the two axes.

As can be seen in Figure 2, Quadrant I (QI) does not include any clusters. Quadrant II (QII) includes Cluster6 and Cluster7 which have a high density and low centrality. The high density indicates that the research topics in these two clusters are well-developed and mature. However low centrality indicates that the research topics are isolated. Quadrant III (QIII) includes Cluster2, Cluster4 and Cluster8. Their low density and centrality reveal that the research topics in these clusters are marginal and immature. Quadrant IV (QIV) includes Cluster1, Cluster3 and Cluster5 which have high centrality but low density. This implies that these clusters are well connected to other clusters, and that the topics within them are at the centre of discussion but undeveloped.

4. Discussion and Conclusion

This study maps the intellectual structure and trends within the digital entrepreneurship field. It highlights key research areas and the relationships between different topics, presenting clear and logical findings on the current state and trends in the field.

The five keywords with the highest co-occurrence frequency are Digital entrepreneurship, Entrepreneurship, Digitalization, Digital transformation, and Digital technology(ies). This means that these keywords are commonly used and recognised in the core of studies in this field. Consequently, they have received a large share of the discussions in this field.

According to modularity clustering, eight clusters were identified and divided into four quadrants based on cluster centrality and density. Interestingly, no cluster is placed in Quadrant I, which contains central and developed clusters. The absence of clusters in this quadrant suggests that the digital entrepreneurship field is still in its infancy and has considerable potential for growth.

Quadrant II includes Cluster6 and Cluster7, which are described as peripheral and developed. These themes have become more specialized and separated from the main themes of the field of study. In the Cluster6 Ecosystem(s), Information technology(ies), and Multisided platforms; in the Cluster7 Innovative education, Online courses, Online education and training are the first three keywords with the highest degree centrality, making them important topics in their cluster (Baskici and Gokmen, 2024). Cluster7 can be considered an outcome of the COVID-19 pandemic, which forced people to work and study from home.

Cluster2, Cluster4 and Cluster8 are located in Quadrant III, which indicates their peripheral and underdeveloped status. The topics included in these themes could be the focus of researchers' attention due to their marginal status and lack of development. The first three keywords with the highest degree centrality in Cluster2 are Entrepreneurial ecosystem(s), Digital entrepreneurial ecosystem(s), and Digital ecosystem(s); in Cluster4 they are Business innovation, Crisis, and Digital adoption; and in Cluster8 they are Identity, Home-based business, and Liminality. Of these clusters, Cluster2 is particularly noteworthy. Digital entrepreneurship is a relatively recent phenomenon. However, it requires an ecosystem in which to develop. While research into such ecosystems is still in its infancy, this cluster suggests that one is beginning to emerge.

Quadrant IV includes Cluster1, Cluster3 and Cluster5, which are described as central and underdeveloped. Quadrant IV lists topics with the potential to become mainstream research trends. The first three keywords with the highest degree centrality in Cluster1 are Digital entrepreneurship, Digitalization, and Digital technology(ies); in Cluster3 they are Digital entrepreneurial intention(s), Entrepreneurship education, and Saudi Arabia; and in Cluster5 they are Entrepreneurship, Digital entrepreneurs, and Social media.

This study has several limitations. Firstly, the analyses were conducted based on the keywords of the articles. Other academic documents were not included in the study. Including these in future research could broaden the scope of the analysis and provide a more comprehensive understanding of how the field has developed. Secondly, the analyses were conducted for a single period. Future studies could include sub-periods in their analyses. This would enable the observation of development and changes in the field over the years.

Ethics Declaration

Ethical review not required because of using secondary data.

AI Declaration

An AI tool was not used in the development of the paper.

References

- Abubakre, M., Faik, I. and Mkansi, M. (2021) "Digital Entrepreneurship and Indigenous Value Systems: An Ubuntu perspective", *Information Systems Journal*, Vol 31, No. 6, pp 838–862.
- Angammana, A. S. and Jayatissa, L. A. (2015) "A bibliometric Study of Postgraduate Theses in Library and Information Science: With Special Reference to University of Kelaniya and University of Colombo", *Journal of the University Librarians' Association of Sri Lanka*, Vol 19, No. 1, pp. 32–53.
- Baskici, C. and Gokmen, Y. (2024) "Evaluating the Conceptual Development of Healthcare Leadership Literature with a Network Approach", *Academic Conferences International*, Lisbon.

- Bastian, M., Heymann, S. and Jacomy, M. 2009. "Gephi: An Open Source Software for Exploring and Manipulating Networks", International AAAI Conference on Weblogs and Social Media.
- Blondel, V. D., Guillaume, J. L., Lambiotte, R. and Lefebvre, E. (2008) "Fast Unfolding of Communities in Large Networks", *Journal of Statistical Mechanics: Theory and Experiment*, Vol 10, p. P10008.
- Borgatti, S. P., Everett, M. G. and Freeman, L. C. (2002) *Ucinet for Windows: Software for Social Network Analysis*. Analytic Technologies, Harvard.
- Callon, M., Courtial, J. P. and Laville, F. (1991) "Co-word Analysis As a Tool for Describing the Network of Interactions between Basic and Technological Research: The Case of Polymer Chemistry", *Scientometrics*, Vol 22, No. 1, pp. 155–205.
- Cobo, M. J., López-Herrera, A. G., Herrera-Viedma, E. and Herrera, F. (2011) "An Approach for Detecting, Quantifying, and Visualizing the Evolution of a Research Field: A Practical Application to the Fuzzy Sets Theory Field", *Journal of Informetrics*, Vol 5, pp. 146-166.
- Dana, L., Crocco, E., Culasso, F. and Giacosa, E. (2024) "Mapping the Field of Digital Entrepreneurship: A Topic Modeling Approach", *International Entrepreneurship and Management Journal*, Vol 20, p. 1011–1045.
- Feng, J., Zhang, Y. Q. and Hao, Z. (2017) "Improving the Co-word Analysis Method Based on Semantic Distance", *Scientometrics*, Vol. 111, pp. 1521-1531.
- Han, H., Gui, J. and Xu, S. (2013) "Revealing Research Themes and Their Evolutionary Trends Using Bibliometric Data Based on Strategic Diagrams", *IEEE Computer Society*, pp. 653–659.
- Hosseini, E., Milani, K. T. and Sabetnasab, M. S. (2025) "Development and Maturity of Co-word Thematic Clusters: The Field of Linked Data", *Library Hi Tech*, Vol. 43, No. 1, pp. 81-113.
- Khasseh, A. A., Soheili, F., Moghaddam, H. S. and Chelak, A. M. (2017) "Intellectual Structure of Knowledge in iMetrics: A Co-word Analysis", *Information Processing and Management*, Vol 53, No. 3, pp. 705–720.
- Kollmann, T., Kleine-Stegemann, L., de Cruppe, K. and Then-Bergh, C. (2022) "Eras of Digital Entrepreneurship", *Connecting the Past, Present, and Future*, Vol 64, No. 1, pp. 15–31.
- Li, S., Zhang, Z. and Huang, Y. (2024) "Digital Entrepreneurship Intention and Digital Entrepreneurship Behavior: The Mediating role of Managing Learning and Entrepreneurship Education", *Education + Training*, Vol 66, No.2/3, pp. 195–212.
- Liu, G.-Y., Hu, J.-M. and Wang, H.-L., (2012) "A co-word analysis of digital library field in China", *Scientometrics*, Vol 91, pp. 203–217.
- Liu, H. et al (2025) "Bibliometric Analysis and Content Analysis of Digital Entrepreneurship: Utilizing the WoS and Scopus Databases", *Humanities and Social Sciences Communications*, Vol. 12, No. 1, pp. 1-26.
- Liu, W. et al (2024) "Digital Entrepreneurship: Towards a Knowledge Management Perspective", *Journal of Knowledge Management*, Vol 28, No. 2, pp. 341–354.
- Lungu, A. E., Georgescu, M. R. and Juravle, D. (2024) "A Bibliometric Analysis of Digital Entrepreneurship", *Journal of the Knowledge Economy*, pp. 1-29.
- Soriano-Pinar, I., Díaz-Garrido, E. and Bermejo-Olivas, S. (2023) "Digital Transformation for a Circular Economy: Insights from Co-word Analysis". *The Journal of Technology Transfer*.