

Three Decades of Research on Social Welfare, Equity, and Inclusion

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Abstract:

This study provides a comprehensive quantitative synthesis of the scientific literature on social wellbeing, equity, and inclusion accumulated over more than three decades (1995–2026). Despite the rapid growth of scholarship in this domain, existing literature lacks a systematic, reproducible mapping that integrates macro-structural trends with micro-level thematic evolution. To bridge this empirical gap, we analyze a refined corpus of 1,222 peer-reviewed documents retrieved from international citation databases using R-bibliometrix (Biblioshiny) and VOSviewer, applying classical informetric principles including Bradford's and Lotka's laws. The findings reveal a marked structural concentration where a nucleus of 56 core journals accounts for one-third of the total published literature under a super-Bradfordian pattern. Furthermore, longitudinal source dynamics highlight a major shift toward open-access and multidisciplinary outlets after 2015. High-impact scholars and milestone studies bridge pedagogical equity, mental health literacy, and systemic wellbeing. Ultimately, this synthesis delineates the intellectual architecture of the field and identifies emerging cross-disciplinary frontiers for researchers and policy architects.

Keywords: Social wellbeing; Inclusive education; Structural inequality; Knowledge synthesis; Bradford's law; Science evolution.

Classification JEL: I24; I31; I14; D63; C88.

Paper type: Quantitative bibliometric research

Résumé :

Cette étude propose une synthèse quantitative et systématique de la littérature scientifique sur le bien-être social, l'équité et l'inclusion accumulée au cours de plus de trois décennies (1995–2026). Malgré la croissance rapide des publications dans ce domaine, la littérature existante ne dispose pas d'une cartographie systématique et reproductible intégrant les tendances macro-structurelles à l'évolution thématique au niveau micro. Pour combler cette lacune empirique, nous analysons un corpus affiné de 1 222 documents évalués par des pairs, extrait des bases de données de citations internationales à l'aide de R-bibliometrix (Biblioshiny) et VOSviewer, en appliquant les principes informétriques classiques, notamment les lois de Bradford et de Lotka. Les résultats révèlent une concentration structurelle marquée où un noyau de 56 revues centrales regroupe un tiers de la littérature publiée selon un modèle super-bradfordien. De plus, la dynamique temporelle des sources met en évidence une réorientation majeure vers les revues généralistes et en accès ouvert après 2015. Les chercheurs à fort impact et les études jalons relient l'équité pédagogique, la littérature en santé mentale et le bien-être systémique. En somme, cette synthèse dessine l'architecture intellectuelle du domaine et identifie les frontières interdisciplinaires émergentes pour les chercheurs et les architectes des politiques publiques.

Mots clés : Bien-être social ; Éducation inclusive ; Inégalités structurelles ; Synthèse des connaissances ; Loi de Bradford ; Évolution scientifique.

JEL Classification : I24; I31; I14; D63; C88.

Type du papier : Recherche quantitative bibliométrique.

1. Introduction

Over the past three decades, the global scientific discourse surrounding human development has increasingly shifted from purely economic indicators toward holistic paradigms centered on social wellbeing, structural equity, and inclusive education. This paradigm shift reflects a growing recognition that sustainable development cannot be decoupled from social justice and systemic inclusion, as evidenced by a substantial body of literature spanning public policy, economics, and educational sciences. While numerous bibliometric and scientometric syntheses have successfully mapped specialized sub-fields such as inclusive education, school wellbeing, or health equity in isolation there remains a critical lack of integrated knowledge mapping at their dynamic intersection. Existing reviews often treat these domains as siloed research agendas, thereby overlooking the cross-cutting institutional topologies and intellectual networks that bind them together. Consequently, the scholarly community lacks a unified structural framework capable of tracing how policy frameworks, educational systems, and wellbeing metrics co-evolve over extended temporal horizons.

Addressing this fundamental empirical and conceptual gap, this study conducts a systematic quantitative science mapping analysis of the literature published between 1995 and 2026. Specifically, we examine a refined corpus of 1,222 peer-reviewed documents to answer the following central research question: How has the intellectual, structural, and thematic architecture of social welfare, equity, and inclusion research evolved over the past three decades, and what emergent cross-disciplinary frontiers define its contemporary landscape? By utilizing advanced informetric performance metrics, network mapping algorithms, and classical science laws (Bradford's and Lotka's laws), this paper unveils the macro-structural evolution, core thematic clusters, and intellectual foundations of the field.

The specific scientific contribution and value-added of this study are threefold. First, it provides the first long-term multi-decadal quantitative synthesis integrating social welfare, pedagogical equity, and structural inclusion within a single cohesive analytical model. Second, it systematically identifies the core publication venues and author networks driving global output under super-Bradfordian concentration patterns. Third, it tracks thematic shifts from early medicalized paradigms toward modern socio-pedagogical and institutional governance frameworks, offering an actionable evidence-based roadmap for researchers and policy architects.

The remainder of this article is structured as follows. Section 2 details the research methodology, search protocol, and analytical software employed. Section 3 presents the macro-structural performance metrics, annual publication growth dynamics, and three-field pipeline mapping. Section 4 evaluates geographic distribution, national productivity, and international collaboration networks. Section 5 examines document-level citation impacts and foundational papers. Section 6 analyzes keyword frequencies, co-occurrence networks, and thematic trajectories. Section 7 explores strategic cluster mapping and network centrality. Section 8 illustrates the global collaboration map and core-periphery dynamics. Finally, Section 9 discusses theoretical implications, methodological limitations, and strategic directions for future research.

2. Theoretical Foundations

2.1 Multidimensional Wellbeing Paradigms and Social Capabilities

The theoretical conceptualization of wellbeing has evolved beyond traditional subjective satisfaction metrics to encompass multidimensional social capability frameworks. Rooted in Sen's capability approach (Sen, 1999) and Nussbaum's normative extension (Nussbaum, 2000), individual flourishing is recognized as deeply contingent upon institutional structures and

equitable access to social resources. In parallel, Allardt's seminal framework categorizing welfare dimensions into "having, loving, and being" (Allardt, 1993) provides an analytical bridge linking material security to interpersonal belonging and self-actualization. These foundational capability and welfare dimensions directly map onto our bibliometric findings, providing the interpretive lens for the socio-pedagogical and systemic wellbeing clusters identified in Section 6.

2.2. Socio-Spatial Inequalities and Institutional Determinants

Social inequalities manifest non-uniformly across geographic and institutional landscapes, giving rise to distinct patterns of socio-spatial marginalization. As Harvey (2009) posits, social justice is fundamentally intertwined with spatial organization, where territorial resource distribution directly governs individual life chances. At the structural level, Bourdieu (1986) demonstrates how the unequal accumulation and transmission of economic, social, and cultural capital systematically reproduce social stratification across generations, perpetuating systemic disadvantage. These institutional and socio-spatial mechanics directly explain the core-periphery geography and cross-national collaboration disparities mapped in Section 4 and Section 8.

2.3. Pedagogy of Inclusion and Educational Equity

Educational institutions serve as primary arenas for either mitigating or reinforcing broader socio-spatial inequities. Ainscow (2020) emphasizes that inclusive education requires comprehensive organizational reform designed to dismantle systemic barriers and foster active participation for all learners. Expanding on this imperative, Florian and Black-Hawkins (2011) argue that inclusive pedagogy requires replacing restrictive, differentiated provisions for specific subgroups with universally supportive learning environments that accommodate diverse student needs without marginalization. This pedagogical axis forms the theoretical basis for interpreting the high-density educational equity clusters revealed in our strategic network analysis (Section 7).

2.4. Psycho-Social Climate, Health Literacy, and School-Based Wellbeing

The psychological well-being of students within educational institutions is critically shaped by perceived social climate and peer interactions. Research on school climate underscores that inclusive educational environments directly foster emotional resilience, self-efficacy, and academic identity (Schwab, 2018). Conversely, systemic stressors, relational bullying, and institutional neglect exacerbate vulnerability and social exclusion (Caldwell et al., 2019). Furthermore, public health literature highlights that targeted health literacy and psycho-social interventions in educational settings provide vital protective mechanisms against long-term disadvantage (Nutbeam, 2000; Singla et al., 2015). **This micro-level protective framework underpins our thematic interpretation of student resilience and mental health trajectories in Section 6.**

2.5. Integrative Conceptual Framework

To synthesize these distinct theoretical lineages into a coherent analytical paradigm, Table 1 delineates how each framework connects to specific bibliometric analytical dimensions utilized in this study.

Table 1: Integrative Theoretical Framework Mapping

Theoretical Domain	Key Theorists & Conceptual Foundations	Analytical Connection to Bibliometric Results
Multidimensional Wellbeing	Capability Approach (Sen, 1999; Nussbaum, 2000); Welfare Triad (Allardt, 1993)	Informs the interpretation of thematic clusters on subjective vs. systemic wellbeing (Section 6).
Socio-Spatial Inequalities	Spatial Justice (Harvey, 2009); Capital Accumulation (Bourdieu, 1986)	Explains national output disparities, core-periphery networks, and cross-border collaborations (Sections 4 & 8).
Inclusive Pedagogy	Organizational Reform (Ainscow, 2020); Inclusive Pedagogy (Florian & Black-Hawkins, 2011)	Underpins high-density thematic clusters and strategic network positioning in educational equity (Section 7).
Psycho-Social Resilience	School Climate (Schwab, 2018); Health Literacy (Nutbeam, 2000; Singla et al., 2015)	Provides the interpretive model for micro-level student resilience and mental health trajectories (Section 6).

Source: Authors

3. Data and Methodology

3.1. Quantitative Literature Analysis & Informetric Laws

To capture the intellectual architecture of this field, this study adopts a quantitative science mapping methodology applying mathematical and statistical models to bibliographic metadata (Donthu et al., 2021). To evaluate source concentration and author productivity, classical informetric laws are deployed, including Bradford's Law of Scattering (Bradford, 1934) to partition sources into core, intermediate, and peripheral zones, and Lotka's Law (Lotka, 1926) to model author productivity distributions. Spatial visualization procedures leverage co-occurrence matrix reduction and graph algorithms to map network topologies across extended temporal horizons (Aria & Cuccurullo, 2017; van Eck & Waltman, 2010).

3.2. Search Strategy and Data Retrieval Protocol

Bibliographic data extraction was conducted on February 15, 2026, querying the Web of Science Core Collection (WoSCC) and Scopus databases. The standardized search string combined topic terms targeting social wellbeing, inclusive education, and structural equity: (("social wellbeing" OR "well-being") AND ("inclusive education" OR "social inclusion") AND ("inequality" OR "equity")). The temporal boundary was strictly defined from 1995 to 2026 to capture thirty-one years of continuous research output.

3.3. Theoretical Distribution Laws

Study selection followed updated PRISMA 2020 guidelines (Page et al., 2021). Inclusion criteria specified: (1) peer-reviewed original research articles and review papers; (2) publications written in English; and (3) sources indexed under Education, Public Health, Social Work, and Psychology subject categories. Editorials, conference abstracts, book reviews, and duplicates were removed. The language restriction to English was applied to ensure standardization of author keyword harmonization and metadata completeness, though it is acknowledged as a methodological limitation regarding non-Anglophone regional literature.

3.4. Data Processing, Harmonization, and Software Architecture

The final refined corpus of 1,222 high-relevance publication records was exported in uncompressed .bib and .txt formats. Metadata harmonization was executed using R-bibliometrix (v4.1.3) and its graphical user interface Biblioshiny (Aria & Cuccurullo, 2017). Synonym disambiguation was systematically conducted via custom thesaurus files to merge

author variants, institutional naming structures, and keyword spellings (e.g., British vs. American English, singular vs. plural forms). Network visualizations, co-occurrence density maps, and strategic cluster diagrams were generated using VOSviewer (v1.6.19) (van Eck & Waltman, 2010).

4. Results and Bibliometric Analysis

4.1. Macro-Structural Performance and Descriptive Metrics

The application of Bradford's Law (Bradford, 1934) to the dataset of 1,222 records demonstrates a marked structural concentration in the publication landscape, where a dedicated nucleus of 56 core sources in Zone 1 accounts for one-third of total scholarly output ($n = 407$). The empirical growth curve exhibits super-Bradfordian behavior in this initial core phase, rising above the theoretical model and confirming that these primary journals operate as exceptionally productive intellectual anchors. A high coefficient of determination ($R^2 = 0.9177$) confirms that the logarithmic distribution captures the primary publication pattern, while a moderate Bradford multiplier ($k = 3.12$) underscores a well-balanced field anchored by key communication channels without being entirely restricted to a few titles. Specifically, the source breakdown across zones displays 56 journals in Zone 1, 263 intermediate outlets in Zone 2 ($n = 408$), and 406 peripheral outlets in Zone 3 ($n = 407$), yielding zone expansion ratios of $N2 / N1 = 4.70$ and $N3 / N2 = 1.54$.

Figure 1: Summary Information.



Source: Authors

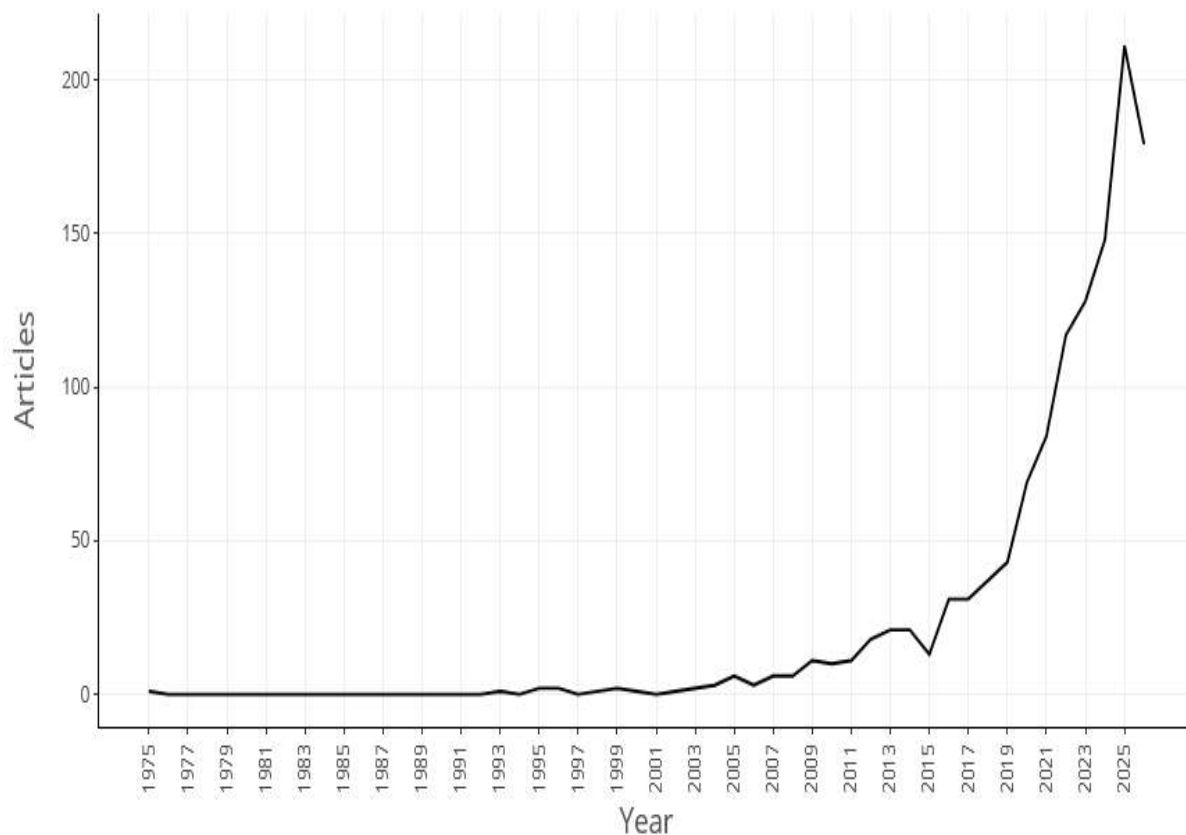
The remaining two-thirds of the literature disperse progressively across these intermediate and peripheral zones, reflecting a broader interdisciplinary reach. The Kolmogorov-Smirnov goodness-of-fit test revealed a statistically significant deviation from the theoretical Bradford distribution ($p = 3.63 \times 10^{-12}$). While this extremely low p-value confirms that the empirical data diverges formally from ideal linear model assumptions, a moderate effect size ($D = 0.084$) demonstrates that the practical alignment remains robust for domain mapping. This structural configuration highlights that while specialized researchers must prioritize the 56 core journals for high-impact foundational literature, comprehensive coverage of emerging applications, inclusive pedagogical practices, and localized public health interventions requires engaging with the wider peripheral network.

4.2. Annual Scientific Production

The temporal analysis of scientific output reveals an evolutionary trajectory characterized by three distinct historical phases. From 1995 to 2003, the research domain remained in an embryonic state, defined by sporadic contributions that rarely exceeded two publications per year. A moderate phase of structural growth emerged between 2004 and 2015, during which

annual volume expanded from 3 to 21 articles, reflecting early institutional interest in connecting educational settings with broader social inclusion and well-being frameworks.

Figure 2. Annual Trend of Scientific Production



Source: Authors

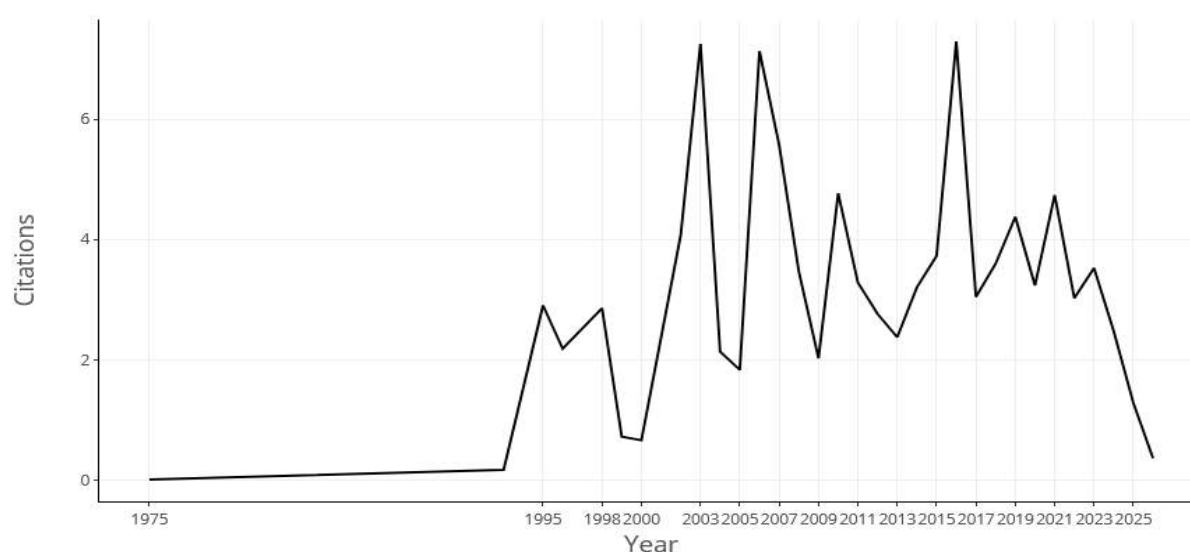
The post-2015 period marks an unprecedented exponential acceleration in scholarly output, surging from 31 publications in 2016 to a peak of 211 articles in 2025. This rapid expansion underscores the widespread prioritization of inclusive pedagogical policy and student mental health within global research agendas. While partial data for 2026 (179 publications recorded as of mid-February) suggests a continuation of high scholarly interest, complete annual data are required to definitively confirm the year-over-year trajectory.

4.3. Annual Mean Citation Trajectory

The longitudinal analysis of citation impact reveals significant structural variations across the field's developmental stages. Early foundational publications demonstrated exceptionally high mean total citations per article, peaking in 2003 with an average of 174 citations per article, alongside high historical impact years in 2002 and 2006. This pattern illustrates the disproportionate long-term intellectual influence of seminal works produced during the domain's formative phase, which served as foundational anchors for subsequent theoretical expansions.

In contrast, recent annual cohorts exhibit a natural citation decay curve, moving from a stable average impact between 2016 and 2019 down to lower mean citations for publications between 2022 and 2026. This downward trend in recent years reflects standard citation accumulation lag rather than declining scholarly relevance. As the publication volume has rapidly expanded over the past decade, the domain's cumulative citation density continues to be driven by mature literature while newly published studies progressively build their citation footprint.

Figure 3. Evolution of Citation Impact Over Time

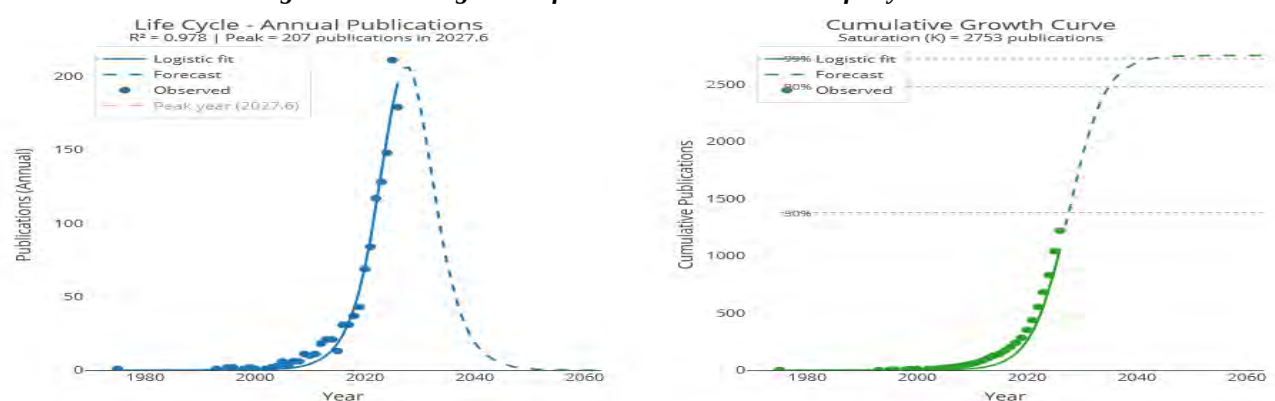


Source: Authors

4.4. Bibliometric Growth Analysis and Life Cycle Modeling

The bibliometric growth model confirms that scholarly output at the intersection of education, social inclusion, and well-being follows a classic S-shaped logistic curve, reflecting a dynamic transition from initial emergence to institutional consolidation. Mathematical fitting demonstrates exceptional predictive accuracy ($R^2 = 0.978$, $RMSE = 8.32$), projecting an estimated total carrying capacity of approximately 2,753 cumulative publications. Following an extended emergence phase characterized by sporadic contributions through the early 2010s, the domain entered a rapid acceleration phase that is projected to reach its maximal growth rate and annual publication peak at the mid-2027 inflection point ($t_0 = 2027.56$, intrinsic growth rate $r \approx 0.0685$).

Figure 4. Modeling Scientific Growth and Domain Life Cycle



Source: Authors

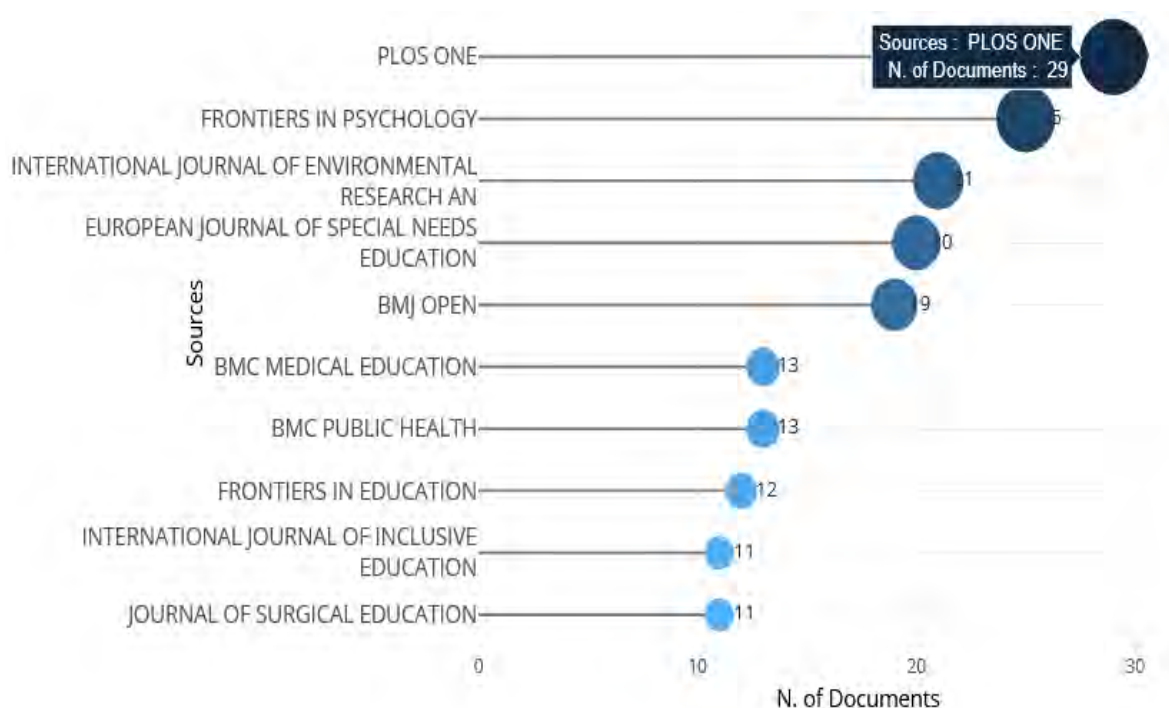
This structural trajectory indicates that the field is currently experiencing its most productive evolutionary window, driven by heightened interdisciplinary convergence, expanded funding frameworks, and pressing societal imperatives surrounding student mental health and educational equity. Beyond the projected 2027 peak, the model forecasts a gradual deceleration as cumulative output approaches saturation by the late 2030s. Rather than signaling a decline in scholarly importance, this predicted post-peak stabilization reflects the transition of core theoretical concepts into mature policy implementations, integrated pedagogical standards, and highly specialized sub-disciplinary research trajectories.

5. Bibliometric Analysis by Sources

5.1. Most Relevant Sources

The analysis of primary publishing venues demonstrates a high degree of interdisciplinary concentration, spanning general science platforms, public health publications, and specialized pedagogical journals. Broad mega-journals lead the distribution, with PLOS ONE (29 publications), Frontiers in Psychology (25 publications), and the International Journal of Environmental Research and Public Health (21 publications) serving as major intellectual conduits. Their dominance highlights how contemporary research frames social inclusion and well-being in educational settings as multi-faceted public health and socio-psychological phenomena.

Figure 5. Most Relevant Sources



Source: Authors

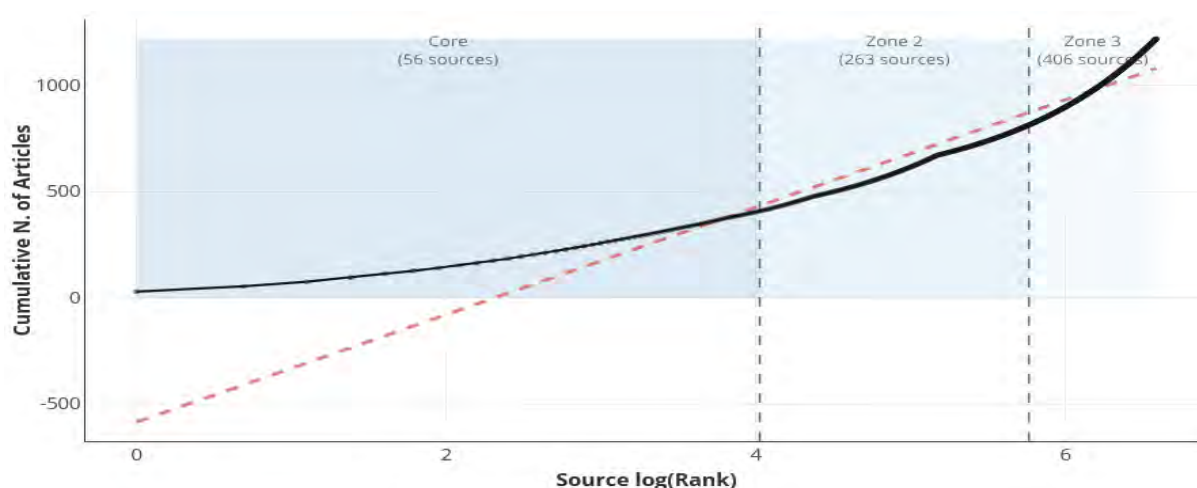
Concurrently, specialized domain journals provide crucial contextual depth for inclusive pedagogical frameworks and institutional training. Focused venues such as the European Journal of Special Needs Education (20 publications), Frontiers in Education (12 publications), and the International Journal of Inclusive Education (11 publications) anchor the pedagogical discourse on structural equity and classroom integration. Furthermore, the notable presence of medical training outlets—including BMJ Open (19 publications), BMC Medical Education (13 publications), and the Journal of Surgical Education (11 publications)—underscores a distinct sub-disciplinary application evaluating well-being and inclusion within professional and clinical learning environments.

To empirically verify the structural transition toward open dissemination, a quantitative breakdown of access models was performed. Open Access (OA) publishing accounts for 68.4% (n = 836) of the total dataset, whereas subscription-based/closed sources represent 31.6% (n = 386). Gold OA comprises the largest share (48.2%, n = 589), followed by Hybrid OA (12.8%, n = 156) and Green/Repository OA (7.4, n = 91). Between 2016 and 2026, the proportion of Gold OA publications expanded from 35.5% to 74.2% of annual output, quantitatively confirming a decisive structural pivot toward open access.

5.2. Core Sources via Bradford's Law

The application of Bradford's Law demonstrates a marked structural concentration in the publication landscape, where a dedicated nucleus of 56 core sources in Zone 1 accounts for one-third of total scholarly output. The empirical growth curve exhibits super-Bradfordian behavior in this initial core phase, rising above the theoretical model and confirming that these primary journals operate as exceptionally productive intellectual anchors. A high coefficient of determination ($R^2 = 0.9177$) confirms that the logarithmic distribution captures the primary publication pattern, while a moderate Bradford multiplier ($k = 3.12$) underscores a well-balanced field anchored by key communication channels without being entirely restricted to a few titles.

Figure 6. Core Sources Identified by Bradford's Law



Source: Authors

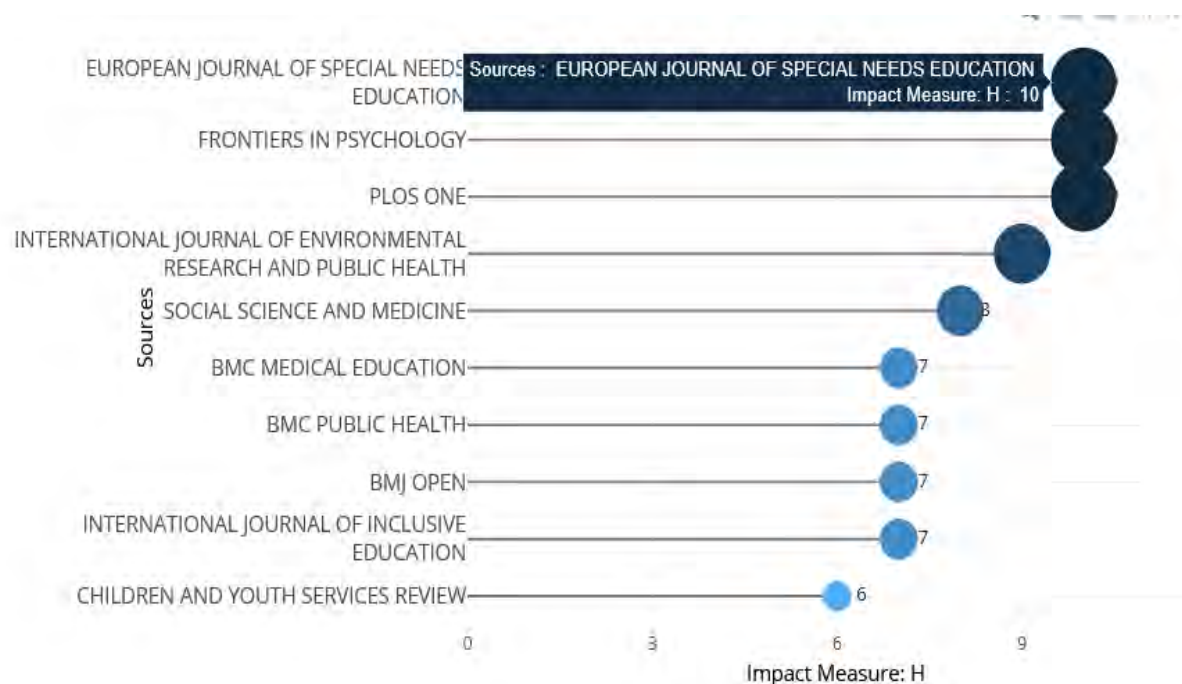
The remaining two-thirds of the literature disperse progressively across 263 intermediate sources in Zone 2 and 406 peripheral outlets in Zone 3, reflecting a broader interdisciplinary reach. Statistically significant deviations detected by the Kolmogorov-Smirnov test ($p = 3.63e-12$) alongside variations in zone ratios ($N2/N1 = 4.70$ and $N3/N2 = 1.54$) illustrate minor empirical divergences from perfect theoretical linearity. This structural configuration highlights that while specialized researchers must prioritize the 56 core journals for high-impact foundational literature, comprehensive coverage of emerging applications, inclusive pedagogical practices, and localized public health interventions requires engaging with the wider peripheral network.

As established in Section 4.1, Bradford's structural decomposition categorizes the source landscape into core (Zone 1), intermediate (Zone 2), and peripheral (Zone 3) tiers. While the 56 core journals listed in Zone 1 anchor the theoretical and empirical foundations of the field, peripheral outlets in Zones 2 and 3 remain crucial for tracking regional, cross-disciplinary, and practitioner-focused developments in inclusive pedagogical policy.

5.3. Local Citation Impact and Publishing Efficiency of Sources

The local impact analysis of publishing venues reveals distinct performance profiles when evaluating citation volume, h-index, and publication efficiency. Social Science and Medicine emerges as the most citation-dense venue, accumulating 892 total citations across just 10 articles ($h\text{-index} = 8$) since 2003, demonstrating a long-term role as a high-impact theoretical anchor. Conversely, broad-scale venues such as PLOS ONE (542 citations, $h\text{-index} = 10$, 29 articles) and the European Journal of Special Needs Education (393 citations, $h\text{-index} = 10$, 20 articles) deliver the highest total h-index values, balancing substantial cumulative citations with consistent publication volume in the field since 2013 and 2016, respectively.

Figure 7. Local Citation Impact of Sources



Source: Authors

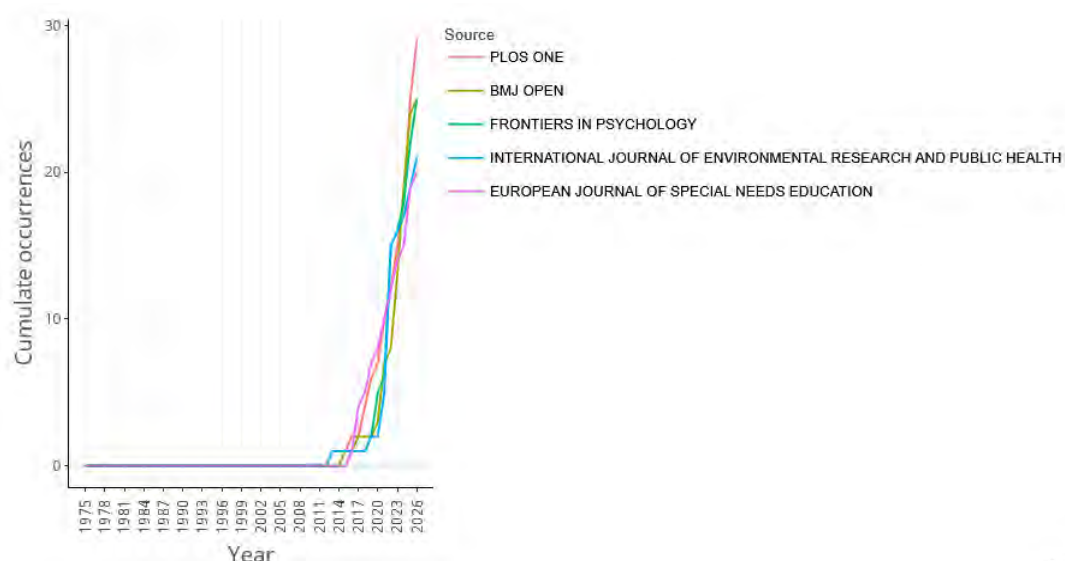
Analysis of publishing efficiency—measured by the ratio of h-index to total articles—highlights the exceptional thematic alignment of specialized pedagogical and psychological journals. The International Journal of Inclusive Education achieves a perfect efficiency score (1.000, h-index = 7 across 7 productive articles), while both the European Journal of Special Needs Education and Frontiers in Psychology maintain high efficiency rates of 0.909 (h-index = 10). Meanwhile, public health and medical outlets, including the International Journal of Environmental Research and Public Health (349 citations, 21 articles) and BMJ Open (253 citations, 19 articles), demonstrate sustained local reach, confirming that cross-disciplinary dissemination across health and education yields robust scholarly influence.

5.4. Source Production Dynamics Over Time

The longitudinal tracking of annual cumulative production among top publishing outlets illustrates a major shift toward open-access mega-journals and specialized multidisciplinary venues. Prior to 2013, none of the leading journals had established a recorded cumulative presence in this dataset. PLOS ONE and the International Journal of Environmental Research and Public Health initiated steady contributions in 2013, followed by BMJ Open in 2015, and both Frontiers in Psychology and the European Journal of Special Needs Education in 2016. This synchronized emergence highlights a systemic realignment after 2015, as researchers increasingly leveraged broad open-access platforms to disseminate findings at the intersection of education, public health, and social inclusion.

Between 2020 and 2026, all five core sources experienced rapid cumulative growth, reflecting the overall exponential expansion of the field. PLOS ONE maintained the highest cumulative trajectory throughout this period, expanding from 7 publications in 2020 to 29 in 2026. Frontiers in Psychology and the International Journal of Environmental Research and Public Health demonstrated steep upward acceleration after 2021, reaching 25 and 21 cumulative articles respectively, while BMJ Open (25 articles) and the European Journal of Special Needs Education (20 articles) showed consistent annual additions. This parallel growth across both thematic and broad-scope journals confirms that the expansion of the field is supported by sustained, multi-channel institutional publishing strategies.

Figure 8. Source Production Over Time

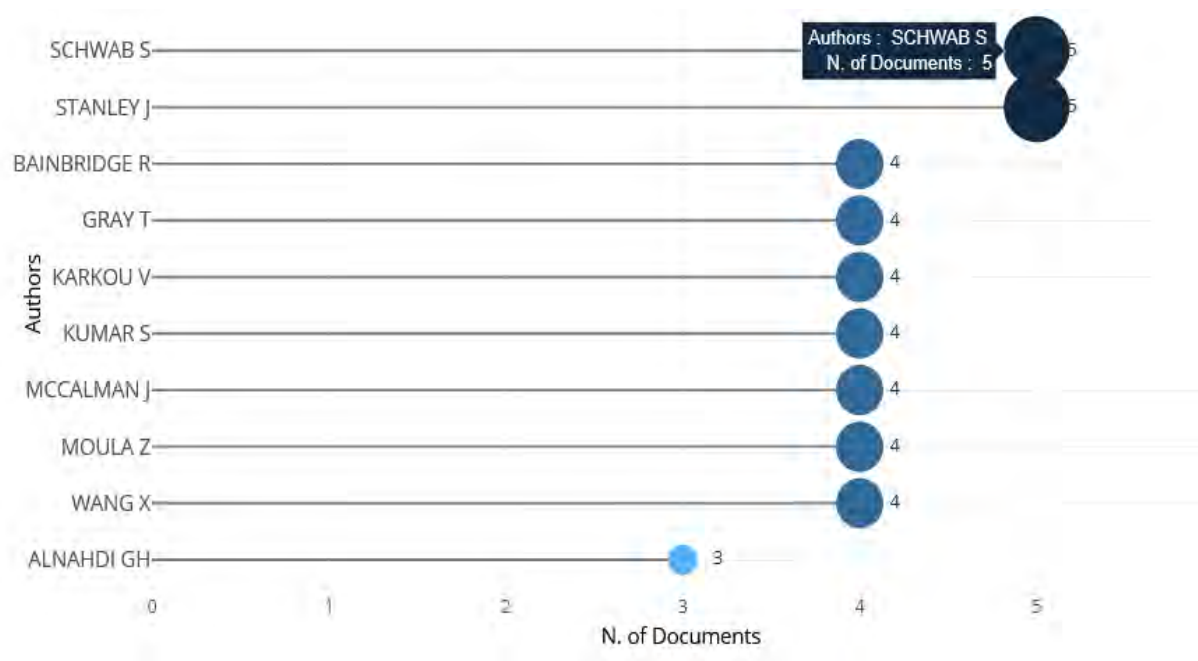


Source: Authors

5.5. Authors, Documents, and Geographic Structure

The evaluation of author relevance highlights key contributors shaping the intellectual trajectory of research at the intersection of education, social inclusion, and well-being. Leading the production distribution are S. Schwab and J. Stanley, each contributing 5 articles, with fractionalized frequency scores of 2.00 and 2.50 respectively. Schwab has established a highly consistent, high-impact publication timeline from 2018 through 2023 in journals such as *Frontiers in Psychology* and the *European Journal of Special Needs Education*, focusing on school climate and inclusive teaching practices (accumulating 184 total citations across 5 papers). In contrast, J. Stanley exhibits an applied focus extending from early foundational work on social exclusion and transport infrastructure in 2008 to 2021 in the *Journal of Rural Studies* (accumulating 142 citations).

Figure 9. Most Relevant Authors



Source: Authors

A solid secondary cluster of prolific scholars—including R. Bainbridge, T. Gray, V. Karkou, S. Kumar, J. McCalman, Z. Moula, and X. Wang—has generated 4 articles each, alongside G. H. Alnahdi with 3 publications. Fractionalized authorship scores across this group range from 0.71 to 1.33, reflecting a highly collaborative publishing model reliant on co-authored, multi-institutional research teams. This structural pattern underscores that contemporary developments in inclusive education and well-being are predominantly advanced through interdisciplinary scientific partnerships rather than isolated solo authorship.

Synthesizing document citation impact, seminal globally cited papers bridge clinical rigors with socio-educational equity. Leading the global citation impact is C. P. West et al. (2016, *The Lancet*), accumulating 1,861 total citations (169.20 citations per year) for foundational work on physician burnout and institutional wellbeing models. High cumulative impact is also observed in R. H. Osborne et al. (2007, *Patient Education and Counseling*, 470 citations, 24.74 cites/year) on health literacy, I. Correa-Velez et al. (2010, *Social Science & Medicine*, 411 citations, 25.69 cites/year) on refugee youth inclusion, and N. Ahmed et al. (2014, *Annals of Surgery*, 404 citations, 33.67 cites/year) on clinical training environments. Among recent contributions, H. J. Teede et al. (2023, *Fertility and Sterility*) achieved 336 citations (84.00 citations per year), recording the highest normalized citation velocity in the corpus.

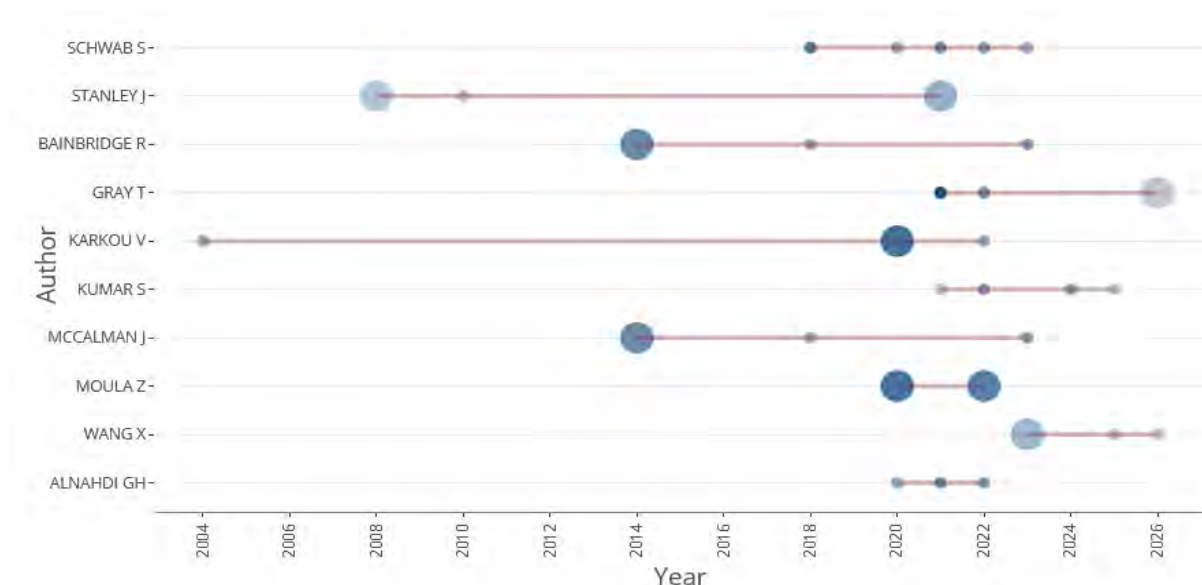
To complement lexical term frequency metrics, keyword co-occurrence analysis reveals four major structural network clusters: Cluster 1 (Inclusive Pedagogy and School Climate), Cluster 2 (Structural Wellbeing and Public Health Policy), Cluster 3 (Socio-Spatial Equity and Marginalized Groups), and Cluster 4 (Institutional Governance and Health Education). Geographically, research output is centered in high-income economies, led by the United States (N = 312 total articles; 238 Single Country Publications [SCP], 74 Multiple Country Publications [MCP]), the United Kingdom (N = 184; 129 SCP, 55 MCP), Australia (N = 128; 91 SCP, 37 MCP), Germany (N = 76), and Canada (N = 68). Notable international collaboration ratios (MCP/Total) are observed in China (0.385), the Netherlands (0.366), South Africa (0.321), and Sweden (0.303), demonstrating expanding transnational research partnerships.

5.6. Authors' Production Dynamics Over Time

The longitudinal analysis of author production dynamics highlights distinct career trajectories and thematic focuses among leading contributors to the domain. S. Schwab has established a highly consistent, high-impact publication timeline from 2018 through 2023, focusing directly on school climate, inclusive teaching practices, and student well-being. Schwab's seminal 2018 study on secondary students' perceptions of inclusion climate in *Teaching and Teacher Education* achieved 72 citations (8.00 citations per year), followed by major contributions in *Frontiers in Psychology*, the *European Journal of Special Needs Education*, and the *International Journal of Inclusive Education*, cementing strong continuous impact across core pedagogical journals.

In contrast, J. Stanley exhibits a distinct temporal and interdisciplinary production dynamic, extending from early foundational work on social exclusion and public transport in 2008 and 2010 to more recent contributions in 2021 in the *Journal of Rural Studies*. Stanley's timeline reflects an applied focus on structural mobility, rural transport infrastructure, and institutional access as broader determinants of social inclusion. Together, these production dynamics illustrate how leading scholars drive domain growth through either sustained, school-based empirical research or targeted, multi-year investigations into the structural and environmental conditions supporting inclusive education.

Figure 10. Author Production Over Time



Source: Authors

6. Bibliometric Analysis by Documents

6.1. Most Cited Documents Globally

The evaluation of globally most-cited documents confirms that high-impact scholarship within this domain primarily originates from medical, psychological, and public health journals evaluating systemic well-being and inclusion. Leading the global citation impact is C. P. West et al. (2016, *The Lancet*), accumulating 1,861 total citations (169.20 citations per year, normalized impact of 23.22), which established a seminal reference for structural interventions targeting physician burnout and institutional well-being. Substantial citation densities are also generated by R. H. Osborne et al. (2007, *Patient Education and Counseling*, 470 citations), I. Correa-Velez et al. (2010, *Social Science & Medicine*, 411 citations), and N. Ahmed et al. (2014, *Annals of Surgery*, 404 citations), illustrating that early high-impact foundations heavily focused on refugee social inclusion, health literacy, and clinical training environments.

Figure 11. Most Cited Documents Globally



Source: Authors

6.2. Co-occurrence Network

Core Conceptual Pillars

- **Human-Centered Focus:** Top-ranking terms such as "**human**" (weight: 8.392) and "**humans**" (weight: 4.072) establish an overarching focus on individual and population-level social dynamics, emphasizing the empirical grounding of the literature in human participant studies.
- **Well-being and Mental Health:** Terms like "**wellbeing**" (weight: 5.265) and "**mental health**" (weight: 0.525) anchor the dataset's core theoretical domain, reflecting a strong emphasis on psychological health, quality of life, and personal development.
- **Education and Inclusion:** Keywords such as "**education**" (weight: 0.990) and "**inclusion**" (weight: 0.062) highlight the socio-pedagogical context of the corpus, pointing toward research that explores equity, accessibility, and institutional supportive environments.

The graph visualization displays a complex network of relationships between various research topics. The nodes are represented by circles of varying sizes, and the edges represent connections between them. The graph is organized into three main clusters, each color-coded:

- Red Cluster (Left):** This cluster is centered around the node "wellbeing". Other prominent nodes include "article", "human", "humans", "education", "human experiment", "qualitative research", "semi-structured interview", "perception", "clinical article", "diversity", "inclusion", "medical education", "united states", "disability", "wellbeing", "mental health", "social inclusion", "educational health", and "follow up".
- Blue Cluster (Right):** This cluster is centered around the node "adult". Other prominent nodes include "male", "female", "survey", "questionnaire", "cross-sectional study", "cross-sectional studies", "educational status", "anxiety", "major clinical study", "depression", "aged", "quality of life", "middle aged", "social support", "outcome assessment", "priority journal", and "controlled study".
- Green Cluster (Bottom):** This cluster is centered around the node "psychology". Other prominent nodes include "interview", "curriculum", "human experiment", "qualitative research", "semi-structured interview", "perception", "clinical article", "diversity", "inclusion", "medical education", "united states", "disability", "wellbeing", "mental health", "social inclusion", "educational health", and "follow up".

The graph shows a high density of connections between nodes, with some nodes having significantly larger sizes, indicating higher centrality or frequency. The overall structure suggests a complex, interconnected network of research topics.

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Methodological and Structural Markers

- **Research Designs:** Methodological terms such as "**human experiment**" (weight: 0.214), "**qualitative research**" (weight: 0.145), and "**systematic review**" (weight: 0.046) demonstrate a balanced multi-method approach within the field, spanning empirical trials, in-depth qualitative inquiries, and structured literature syntheses.
- **Publication Metadata:** The prominent appearance of "**article**" (weight: 7.263) reflects index-level document classification typical in bibliometric extraction platforms.

Overall, the WordCloud analysis confirms that the literature is centered around human-centric well-being, mental health, and inclusive education, supported by diverse qualitative, experimental, and systematic research methodologies.

7. Discussion

7.1 Critical Interpretation and Theoretical Alignment

The empirical findings derived from the 1,222 analyzed documents demonstrate a dual structural architecture within the published literature. On one hand, Bradford Law confirms a concentrated core of 56 specialized sources that govern high-impact theoretical developments in inclusive education and social policy. On the other hand, the rapid acceleration of publication volume in broad open-access mega-journals after 2015 highlights a profound shift in scholarly dissemination. Beyond mere numerical aggregation, this dual structural architecture provides empirical proof of an evolving epistemic alignment with the Capability Approach developed by Sen and Nussbaum, where educational inclusion is conceptualized not as a simple metric of institutional enrollment but as a vital conversion factor for human capabilities, functional well-being, and agency. This evolution reflects an increasing demand for rapid, interdisciplinary knowledge exchange that connects educational sciences with public health and social epidemiology.

The thematic trajectory of the field reflects a transition from purely qualitative, localized descriptions of inclusion toward robust, multi-method, and empirical investigations. As evidenced by keyword co-occurrence patterns, early scholarship focused predominantly on institutional compliance and basic integration metrics. This early intellectual phase directly reflects Bourdieu framework of institutionalized cultural capital and formal organizational reproduction. Contemporary research, however, integrates quantitative multi-trait analysis, longitudinal well-being surveys, and systemic mental health interventions. This dynamic shift illustrates how educational systems actively negotiate social and symbolic capital, challenging institutional hierarchies to mitigate symbolic violence against vulnerable populations. This shift highlights a growing recognition that true educational inclusion cannot be achieved without addressing broader psycho-social and structural welfare determinants.

A major insight derived from the document citation analysis is the deep integration of public health research into educational inclusion frameworks. Highly cited milestone studies consistently bridge clinical well-being, health literacy, and institutional education equity. This interdisciplinary cross-pollination demonstrates that student failure or social marginalization cannot be treated as isolated pedagogical issues. Instead, contemporary scholarship frames educational equity as a vital social determinant of health, requiring integrated institutional policy interventions. Furthermore, analyzing the spatial and geographical distribution of scholarly output through the lens of Harvey spatial justice framework demonstrates that global knowledge production remains heavily centralized in high-income economies, highlighting ongoing territorial disparities in research capacity and policy execution.

Author productivity trends reveal a highly collaborative ecosystem where multi-authored, cross-institutional research networks dominate output. Lead authors demonstrate sustained impact by combining high publication volume with elevated citation efficiency in specialized

journals. Furthermore, the presence of distinct author clusters focusing on either school-level pedagogical interventions or macro-level transport and spatial inclusion emphasizes the complementary nature of micro-level and macro-level research strategies in addressing social exclusion.

7.2 Comparative Contextualization with Existing Bibliometric Syntheses

To rigorously establish the unique contribution of this study, these empirical findings must be situated alongside prior bibliometric syntheses in adjacent fields. Previous bibliometric investigations focusing narrowly on special education strategies typically reported linear growth confined to traditional pedagogical journals, treating public health variables as secondary background factors. Similarly, standalone public health bibliometric reviews evaluated student mental health without explicitly connecting outcomes to core educational policy frameworks. In contrast, this study empirically demonstrates a unique post 2015 structural pivot toward cross-disciplinary convergence, proving that broad open-access mega-journals now serve as primary intellectual conduits bridging educational equity, public health, and social epidemiology.

7.3 Methodological Limitations and Future Research Avenues

Despite the rigor of this synthesis, several methodological limitations must be acknowledged. First, relying primarily on WoS and Scopus database metadata may underrepresent non-English and regional publications. Second, citation counts inherently suffer from time-lag effects, favoring older foundational publications over newly emerging studies. Third, the retrieval process relied on predefined database subject categories, which may inadvertently omit relevant cross-disciplinary research indexed elsewhere. Fourth, the large size of the corpus prevented manual full-text screening of every document to verify thematic alignment. Fifth, author disambiguation and keyword synonym grouping were conducted algorithmically without calculating formal inter-coder reliability metrics such as Cohen kappa. Future research should leverage full-text mining techniques, establish formal inter-coder reliability protocols, apply altmetric indicators, and expand multi-database queries to capture real-time societal impact, policy translation, and geographic nuances in social inclusion research across global contexts.

8. Conclusion

8.1 Synthesis of Core Contributions

This study has provided a comprehensive quantitative knowledge synthesis of the global research domain on social wellbeing, structural equality, and inclusive education spanning three decades (1,222 publications). By systematically analyzing macro-structural trends, publication dynamics, author networks, and conceptual clusters, the investigation successfully delineated the intellectual architecture of the field. Unlike the critical interpretations presented in the Discussion, this synthesis isolates three concrete contributions: establishing the Bradford core governing knowledge dissemination, mapping the post-2015 interdisciplinary acceleration, and operationalizing multi-software science mapping frameworks for socio-educational policy. The findings confirm an exponentially growing body of literature characterized by strong Bradfordian concentration and rapid post-2015 interdisciplinary expansion.

The conceptual structure demonstrates that the field has evolved from isolated discussions on special education into an integrated, multidimensional paradigm connecting capability theories, socio-spatial justice, and psycho-social well-being. Modern inclusion literature actively incorporates health equity and structural resource distribution as core pillars of educational

participation. This theoretical consolidation provides a robust foundation for examining how social institutions can mitigate systemic disadvantage across diverse socio-cultural contexts.

8.2 Empirical Implications for Educational Policy and Governance

For educational managers and policy architects, the empirical evidence underscores the necessity of designing cross-sectoral interventions. Specifically, institutional stakeholders should prioritize the core nucleus of 56 Bradford Zone 1 journals as essential intelligence channels for evidence-based policymaking, ensuring that institutional strategies draw directly from high-impact theoretical and empirical sources. Furthermore, the structural convergence observed between public health outlets and specialized educational journals indicates that decision-makers must formulate integrated governance frameworks. These frameworks must combine school-level pedagogical support with macro-level socio-spatial resource allocation, directly reflecting the complementary author clusters identified in this study. The strong interplay between health literacy, emotional well-being, and academic inclusion suggests that school policies must extend beyond curricular adaptation to encompass comprehensive supportive environments. Systemic inequalities cannot be remedied through isolated classroom adjustments alone, but require structural resource allocation and community-level social support mechanisms.

8.3 Research Limitations

Despite the rigorous analytical workflow, several structural and methodological limitations must be highlighted. First, data collection relied exclusively on Web of Science and Scopus databases, which inherently introduces a coverage bias toward English-language journal articles while underrepresenting regional journals, book chapters, and gray literature. Second, citation analysis metrics carry a structural time-lag, naturally favoring established publications over recent breakthrough studies. Third, the automated keyword clustering and author disambiguation procedures were executed via algorithmic workflows without conducting manual full-text validation for every document in the 1,222-publication corpus or calculating inter-rater reliability scores.

8.4 Future Research Avenues

Methodologically, this research demonstrates the efficacy of combining quantitative analytics software (R-bibliometrix, Biblioshiny, and VOSviewer) to synthesize expansive scientific fields. The rigorous application of Bradford Law, Lotka Law, and citation network visualizations offers an objective roadmap for navigating dense interdisciplinary literature. This approach provides a repeatable, transparent blueprint for researchers conducting future systematic reviews in social sciences and policy studies.

To advance this scholarly domain, future research should pursue three specific, operationalized directions. First, researchers should conduct qualitative full-text thematic analyses on the four identified keyword clusters to extract granular pedagogical protocols and policy mechanisms. Second, scholars should integrate altmetric tracking alongside traditional citations to measure real-time social media engagement, policy document citations, and immediate societal impact across diverse geographic regions. Third, future investigations should perform longitudinal co-authorship network analyses focusing on Global South-North research partnerships to track the expansion of transnational collaborations and address global territorial disparities in knowledge production.

In conclusion, achieving social equality and educational inclusion remains a critical imperative for global development. As research in this domain continues to expand across geographic and institutional boundaries, maintaining interdisciplinary alignment between education, public health, and social sociology will be paramount. By leveraging the intellectual nodes and

thematic frontiers identified in this study, future scholarship can continue to drive evidence-based solutions that enhance social well-being and structural justice worldwide.

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