Policy Convergence Among Global Policy Actors in Education Sector: a Bibliometric Analysis

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Abstract. With the ongoing policy changes globally, an understanding of policy convergence would help mitigate the inefficiencies that persist in implementing a new policy. By referring to literature in the past, taking inputs from policy actors and understanding the social and intellectual structure among the publication since 1985, this study aims to establish a starting point for future researchers and policymakers to begin their research on policy convergence and policy transfer. An amalgamation of 230 publications was taken from the Scopus database between 1985-2021 and subjected to bibliometric and network analysis. Another objective of this study is to identify crucial clusters evolving from the network by conducting a co-citation analysis of references. The results make the publication trends in the domain, influential authors, relevant journals and affiliations relevant. This paper recognizes the core research topics and theoretical frameworks in education and policy convergence. The paper concludes with suggested research prospects and its implications for policymakers to take the research forward in the future.

Keywords: Bibliometric, co-citation, policy convergence, policy investment, digital transformation, education investment

1 Introduction

Over the time-lapse of the twentieth century, developing economies worldwide have faced tensions in implementing education policies. Since their modernization, countries have grappled to establish policies to improve their citizens' quality and access to education, following the United Nations Sustainable Development Goal of ensuring quality primary and secondary education and lifelong learning opportunities for all, irrespective of gender and social status (https://sdgs.un.org/topics/education). Chaudhary & Garg [9] emphasize the importance of improving the shortcomings of existing policies and their historical effects by better implementing new policy measures. It has been necessitated to alter the historical effect of prior policies. Efforts
must be made globally to understand why certain countries have struggled to introduce policies in contexts where consistency in public investment has a long-term and widespread impact [9]. A paradigm change has been observed from “state to governance; bureaucracy to networks; and from delivery to contracting” [36]. This shift is engendered by the coming up of reforms in the state education system, coupled with the generated demand from the market in terms of investments (direct/indirect) in the education sector. Such reforms build upon a post-neoliberal ideology that reconfirms the function of the government in a contemporary form with modern modalities as a part of reformist deactualization. The promulgation of policies concerning the combined effect of policy transfer and policy entrepreneurship simultaneously results in policy convergence.

Policy convergence provides insights into the various policy actors that work alongside to transform the prevailing policy discourses by developing local governing infrastructures through financial aid. This mechanism has been addressed by Kelsey [27] as a regulatory re-territorialization, which enhances the monitoring and political power of the state, transnational and societal actors who possess resources to exercise control over territorial holdings and develop infrastructure that requires participation from interested businesses. To augment higher education, policymakers in both developed and developing nations aim for diverse efforts [2], including audits, assessments, and accreditations. These policy-oriented efforts suggest moving beyond input-based parameters to outcome-based parameters of student success, such as learning and employment outcomes. Studies have highlighted that quality assurance parameters based on an outcome such as employability or self-reported student satisfaction have become instrumental among accreditation bodies [8].

In contrast, to assess quality assurance, measures of student learning outcomes, which are direct in nature, are sporadically applied. As a result, this has resulted in a policy gap that prevents policymakers from assessing the standards of higher education institutes and mapping the respective learning outcomes onto them. Consequently, policymakers need to be more motivated to assess and understand the health of a nation’s higher education system in a globally competitive environment. Owing to this dearth of appropriate benchmarks, the demand for assessing learning outcomes has increased nationally and internationally [1,39]. Hence, Policy convergence is not just limited to the implementation and investments in policies but also expands its scope to the actors and their continuous practices that evolve with time. In our case, the primary stakeholders are higher education institutions, the government, private organizations, NGOs, and students. As part of this study, we refer to the development in policies concerning higher education in emerging economies and the ways in which policies can be improved to make the structures more resilient.

One of the major bottlenecks in higher education to ensure the smooth conduct of large-scale assessments in higher education is to balance the interests of numerous stakeholders, including but not limited to university administration, academic staff, students, and government entities [24,33]. The present study contributes to policy convergence in the education sector by providing a bibliometric analysis of the publications in the field and identifying major themes. The objective is to analyze the intellectual structure presented by the scientific communities that have guided the
research and further outline the future scope for research. As part of this study, we have also conceptualized the idea of policy convergence using ideas from radical theorists such as Foucault and his theory on Power and Knowledge, and Governmentality. Adopting a radical lens enables our conceptualization to be in line with the emerging socio-historical and socio-political perspectives. A radical lens further accounts for observed inequalities and domination discourses set in the context of policy implementation.

1.1 Conceptualization of Convergence

Convergence essentially translates to a societal tendency to become more similar in structures and processes [28]. Convergence takes the form of a macro-level idea associated with multiple economic and social forces as a result of development in a particular sector [28,39]. Multiple theories explain the process of convergence across a variety of ways and structures: that convergence results from the incremental impact of technology [43]; planning mediated by ‘technostructure’ [21]; and an optimized set of societal arrangements [45]. Generally, convergence leads to a dynamic progression which is complex in nature, attributing to evolution of social structures, public policies and political processes [12]. Our conceptualization of convergence ventures within the scope of ‘policy convergence’, which has seen its evolution over a period of time with an increased focus on comparative public policy. The comparative policy studies have explored atheoretical aspects of between-sector policy implementations (health, education, environment etc) [25].

1.2 Policy Convergence

The idea of policy convergence stems from the fact that solutions to certain issues arise gradually and that commonality that exists between similar issues in different geographies can have certain similarities in the solutions. Public policy in the education sector is a multidimensional and complex phenomenon that involves the participation of multiple actors at a global and local level. Policy convergence can be defined using three policy constructs, i.e. policy goals, policy content, and policy instruments. Policy goals signify a common ground for multiple stakeholders to address a common problem. Policy content is defined along the lines of a governmental language which incorporates administrative rules, court decisions, statutes, and regulations. Policy instruments are the institutional and administrative tools available for the conduct of policy. Policy convergence can be defined using policy outcomes, which translate to measuring the impact and consequences of an implemented policy. Finally, Policy style is more of an amalgamation which signifies the formulation of policy responses (rational or incremental, pluralist or corporatist, conflictual or consensual) [7].
2 Research Methodology

Bibliometric analysis has been a researcher's extensively used method to understand and map the knowledge structure of any particular research discipline [29]. According to [22], bibliometric tools such as the co-citation network and analysis of publication trends assist in revealing hidden patterns to a researcher interested in understanding the growth of that domain. Researchers in a particular domain can find connections across collaboration networks, intellectual structure, co-citation coupling etc. These bibliographic associations can be observed as corresponding vertices with linkages among them. A Vertex may denote an author, country, article, institution, source or a set of keywords. Aria & Cuccurullo [3] suggest that the linkages or the edges could depict co-occurrence, co-citation, bibliographic or collaboration coupling. We conduct co-citation coupling among sources, authors and articles.

The present study has conducted Bibliometric analysis using the Bibliometrix package in R [3]. VOS Viewer has established a network among authors and publications [43]. For Bibliometric analysis, details in each paper should be segregated in terms of citations of all other publications. This type of data can be extracted from only a few selected databases. The two crucial databases containing bibliographic information in management and related areas are Elsevier’s Scopus and Clarivate Analytics’ Web of Science. The authors chose Scopus for this study due to its comprehensive results [19]. Papers were selected based on the keywords "Policy convergence" OR "Policy transfer*" OR "Policy Mobility*" OR "Policy Diffusion" AND “Education” in the title, abstract and keywords of the publications. Mathematics, engineering, medical and pure sciences subject areas did not find relevance to the scope of the study and hence were excluded. Thus, our search results were filtered according to social sciences, business management and accounting, economics, econometrics and finance. In addition, articles were filtered according to the English language. The final set of manuscripts represented a time frame from 1985 to 2022.

On manual scanning of the dataset, it was found that no significant publication concerning policy convergence in education was missed out. As a result, the authors settled with a total of 230 manuscripts.

3 Results

The chief findings of this bibliometric review include a snapshot of quantitative results, for instance, year-wise figures of a number of publications, authors, publications, and journals that have had the most influential impact and high-productivity countries with the highest contribution. A similar analysis can be performed on the citation score. This approach would help understand important authors and their contributions, highlighting the core of influence in a discipline. In addition, the results also comprised of co-citation network of first authors, journals and cited references bifurcated into specific clusters.
3.1 Descriptive results

This study covers 230 articles from 137 journals by 367 authors from 1985 to 2021. 48.6% of documents are single-authored, indicating that research in policy convergence in the education sector has also been taken up as initiatives by single individuals.

3.2 Annual Article Production

Figure 1 highlights the yearly publication output of journal articles. This supports the evidence provided by [7] that during the 90s, there was an unclarity regarding policy convergence. Scholars worldwide were trying to understand the differences between policy convergence, policy transfer and policy diffusion. Although the first study was published in 1985, there needs to be more evidence to support the missing interest in the field of policymaking. The publication trend can be classified into two halves – the first being the early stage which lasted from 1985 to 2007 when on average, one or two articles were published every year except 2006. The second stage explains the increasing trend in publications. This pattern clearly shows that policy convergence research is gaining traction and the attention of researchers and policymakers.

![Number of Articles](image)

**Fig. 1.** Number of articles annually

3.3 Most prominent articles

The most cited article, "Policy Networks and Innovation Diffusion: The Case of State Education Reforms" [34], received 346 citations and discussed a theoretical framework for integrating inputs from policy network research into policy diffusion studies. The second most cited article, "Geographies of Policy Mobilities" [41], received 156 citations and draws focus on the understanding interplay between policy transfer and policy actors responsible for conceptualization, construction, adoption and implementation of policies. The third most cited article, "Following Policy: networks, network ethnography and education policy mobilities" by Ball [5], received 121. The
study explores the relationship between transnational network spaces of education policy and novel intra-national spaces of policy, along with their movements in multiple networks and their gains by being a part of those networks. The fourth most cited paper, "IBM's smart city as techno-utopian policy mobility" [45], has received 113 citations. The paper discusses the policymaking process of an innovative global city by considering Philadelphia's online workforce education initiative as a case. The fifth most cited paper, "Higher Education Policies in Central and Eastern Europe: Convergence toward a Common Model?" [14], received 113 citations. The paper builds upon the developments of the Bologna process, which led to the diffusion of Higher Education policies towards a standard model.

3.4 Co-citation network analysis

A Co-citation network is when a third common author cites a set of two authors based on a journal and published article [44]. Li et al. [30] state that these networks' strength is robust when cited in a third paper. This study's objective for co-citation analysis was to create a parsimonious network and capture the necessary network fields in the literature.

To carry out the co-citation analysis, we first assigned a limit on the number of times an article should be cited to have been included for analysis. Following that, several networks were created by changing the required number of citations. The chosen network involved 40 articles, each cited five times, as on increasing or decreasing, the results generated were either too many references or a very sparse map, which resulted in ambiguous interpretations of results.

The results of co-citation networks are shown in Fig. 2, showing four distinct clusters represented by three different colours, red, green, blue, and yellow. Cluster 1 represents the foundation and incremental development of policy mobilities in the education sector and ways to recontextualize policies; Cluster 2 focuses on the participation of policy actors from the local to international level and their influence in the development of policies; Cluster 3 emphasizes the implication of education policy outcomes at international level and focuses on ways that enable policy diffusion to take place, cluster 4 focuses in understanding the mediating role of policy actors in the policy diffusion process.
Cluster – 1 (foundational and incremental development of policy mobilities in the education sector and ways to recontextualize policies)

Cluster 1 (red) has the highest number of publications, with 13 influential articles. It comprises the work of Ball [4], one of the seminal works focusing on the generic problems occurring in the education space due to globalization. He highlights the importance of implementing these problems to recontextualize policy structures and bring educational reforms. He suggests increasing the commodification of knowledge by enabling educational procedures to play their role in encouraging the creation of an enterprise structure. Building upon Ball's work, Cowen [11] highlights the importance of comparative education as an emerging field of study while adopting the idea of policy mobilities. He distinguishes the interpretation of policy transfer by indicating that the scope of policy transfer is beyond the quality assurance process or deriving ways from other countries and making efforts to implement them in the home country. Similarly, a study by Roger [13] addresses the outcomes of learning and explaining through comparative education.

Cluster 2 (participation of policy actors from local to international level and their influence in the development of policies).

Cluster 2 (green-coloured) consists of 11 papers which again build upon the seminal work of Roger [13] by measuring the impact of globalization on education policies. The paper highlights the importance of external effects on the national education system in a globalized world. He suggests eight mechanisms that would help quantify the external effects: learning, borrowing, teaching, standardization, dissemination, harmonization, imposition and installing interdependence. Ball [5] contributes to the cluster by recognizing the movement of policies within a nation-state by identifying important policy actors, agendas, discourses, connections, resources and solutions for appropriate governance.
Cluster 3 (implication of education policy outcomes at the international level)
Cluster 3 (blue coloured) consists of 10 articles, including two seminal works from [15] and [16] focusing on the incremental growth of policy transfer and outlines a framework for the analysis of policy transfer. It also highlights a continuum to differentiate between various types of policy transfers. A study by Haas [21] investigates the role of policy actors, referred to as epistemic communities, in articulating the causal relationships between complex policy problems, assisting states in recognizing their interests, proposing specific policies and simplifying the ways of negotiation during decision-making.

Cluster 4 (understanding the mediating role of policy actors in the policy diffusion process)
Cluster 4 (Yellow coloured) includes six articles. It follows the work of Knill [28] to establish the relationship between policy convergence and other policy constructs and then suggest approaches to measure the outcomes. According to Knill [28], policy convergence can be explained using five central factors. Firstly, cross national policy convergence which looks at parallel solutions by global actors to an issue. Second, imposition of policies arising from asymmetry in political or economics powers. Third, harmonizing local or national level policies through supranational law. Fourth, emerging regulatory competition, and finally, using transnational communication. Mintrom [38] emphasized on the identification of policy entrepreneurs who can advocate for investments in the higher education sector. They contribute to the policy innovations by accounting for higher probabilities of legislature decisions that are necessary for the investments.

4 Power, Knowledge Theorisation of Policy Convergence

“There is no assumption that markets are good at managing a knowledge economy.”

Stiglitz [40], as a part of his lecture series “Learning for a new economy: insights for the developing world”, talked about how the gap between the developed and the developing countries regarding production and dissemination of knowledge is vaster than the gap in resources. He talked about the need for developing countries to focus on driving the knowledge economy, based not only on borrowing or adapting technologies from the North but also on their adaptations. This is where the whole enchilada of policy convergence and divergence emerges.

As Michel Foucault expounds, knowledge and power have a very close connection. What is considered to be knowledgeable in a particular time and space matrix is based on the existing power dynamics [20]. On the other hand, Stiglitz draws a correlation between knowledge and the public good. He argues that knowledge fulfils the essential elements of a thing being a public good, namely non-rivalrous consumption and non-excludability [40]. Knowledge is not diminished on dissemination to others owing to its non-rivalrous attribute. Stiglitz also contends that it is difficult to exclude someone from getting knowledge [40]. The second attribute makes knowledge an impure public good because the State has a mechanism to exclude certain information from others.
With Foucault’s idea of governmentality, it is understood that the State rationalizes the solutions to the problems faced in a given territory, thereby assuming bio-political power, which helps the government conduct human conduct, making it appear objective knowledge.

On a conjoint reading of Stiglitz’s idea of knowledge as a public good and Foucault’s concept of governmentality, it becomes clear to us that knowledge, and thereby education, becomes a great tool in the hands of the State for various national and strategic decisions. Also, the world has ventured into a new economy, which focuses on expanding the horizons of knowledge and utilizing every ilk of knowledge towards economic and strategic goals. This new knowledge economy finds its marrow in 4 concepts: education and training; information infrastructure; economic incentive and institutional regime; innovation systems. With education and training being one of the kernels of the knowledge economy, it is observed that knowledge production is very closely related to national and strategic objectives for a nation-state. It becomes imperative for States to ameliorate the education sector to make efficacious use of knowledge. Hence, many nations espouse Higher Education (HE) as a strategic goal in a knowledge-driven global economy rather than merely understanding doctoral studies or HE as an academic goal.

Since knowledge, as a value-creator, is endless, there can be no limitations or boundaries applied to it, and ergo, the proclivity towards policy convergence arises. As a result, in achieving such knowledge-driven strategic goals, countries have been emulating, modifying, and adapting policies from other thriving knowledge economies. However, as Joseph Stiglitz articulated that simply borrowing from the North is not a feasible solution for developing countries as the contexts for any two nations cannot be similar for emulation to be successful, and ergo, national path dependence character is to be seen in conjunction with policy convergence [23]. For instance, Hong [23] contrasts Australia and China’s convergence and divergence goals, relying on the different purposes of internationalization of Higher Education for both countries. While Australia, having already proven her mettle in World Class Universities, primarily focuses on expanding internationally to develop her long-term economy, China is still focusing on establishing more WCUs, thereby finding her mark in international politics by enriching her soft power.

Singapore, on the other hand, has quite beautifully used knowledge and education to build its cultural economy and thereby strengthen their economy by engaging with and critiquing significant policy issues. This particular instance acts as a revelation for other nations to foster a relationship between the idea of internationalization of Higher Education and a hint of a cultural path-dependent character [10]. It also brings to light the power dynamics that exist in relation to science and culture. The Singaporean example dawns upon us the notion that despite the inclination of the human mind to seek scientific objectivity (as in hard sciences) over arts and cultural knowledge, nations need to emphasize arts and culture while emulating, formulating HE [10].

In essence, convergence can be characterized as ‘the propensity of social orders to become all the more indistinguishable, to foster likenesses in structures, cycles and exhibitions’. On a full-scale level, intermingling is typically connected with the scope of social and financial powers delivered by industrialism. Most originate from how the
thought emerged continuously and logically as a scope of various examinations arrived at comparable resolutions demonstrating that best-in-class mechanical states are dealing with similar issues and tend to address them in comparative ways. Besides, as open strategy is a complicated, multidimensional marvel, it is pivotal to be exact concerning the parts of a strategy being contrasted with guarantee cross-public comparability.

The quintessence of Policy convergence can likely be one of the following five notions. Firstly, it can imply an assembly of strategy objectives, a meeting of aims to manage typical arrangement issues. Besides, it can allude to strategy content, characterized as the more proper indications of government strategy - resolutions, managerial standards, guidelines, court choices, etc. Thirdly, there might be an intermingling of strategy instruments, for example, the institutional instruments accessible to manage strategy, regardless of whether administrative, managerial or legal. Fourthly, a union might happen on arrangement results, impacts or outcomes. These outcomes of execution could be positive or negative, successful or inadequate.

At last, there might be a unification of myriad styles of strategy. This more spread-out idea refers to the cycle by which strategy reactions are figured out and formed. Such formulations could range from being consensual to conflictual, gradual to regular, expectant to receptive, corporatist to pluralist, and so on.

Extensive proof exists that emulation is a significant cycle that should be examined in closer approach examination. Siegel and Weinberg make the self-evident, however, in some cases neglected, that 'from the start of their reality, countries have tried to get and adjust constructions and approaches from different social orders'. Leichter also has seen that 'public approach and critical thinking is an uncommonly imitative workmanship'. Anderson has proposed that near strategy investigation may even continue under an assumption of the worldwide dissemination of strategy, with an ensuing recognizable proof of each State's unmistakable social and primary deterrents.

The focal attribute of copying is the usage of proof regarding a program or project from abroad and a drawing of examples from that experience. Regarding the scientific categorization of policy assembly above, emulation may clarify a convergence of strategic objectives, content and policy instruments. Coherently, it fails to represent the outcome or style of the policy.

When it comes to the transfusion of the policy objectives, the example of other countries policies is utilized as a model, which is then adjusted and, one would trust, refined according to the peculiarities of the country in which transfusion or emulation is to occur. The policies of this other country fill in as a plan that thrusts an overall thought onto the political plan. Leichter, for instance, contends that 'it is indisputably shown that the impersonation and the dissemination of the policy are significant in Great Britain, Russia and Japan’s medical care strategy as opposed to West Germany’s more imaginative stance.

Anent the second type of transfusion, namely the transfusion of the content of the policy, many meticulous studies on a comparative analysis of policy content have uncovered some astounding similitudes between policies of different countries to the extent of the same phraseology and terminology. The reason for the American impact over myriad policies in Canada to be the fascination amongst policymakers in Canada
towards the American model and not the externalities of U.S. policy. Thereby, he establishes a difference betwixt transfusion motivated by elites and that by activists. An analysis between two historical contexts, namely the first income tax in the U.S. during the period of the Civil War and the enactment of legislations on social security during the New Deal, is conducted by Waltman, wherein he observes evident proof of transfusion or, rather, duplication. Because of the previous, 'one might say that the principal American personal duty was replicated from Great Britain'.

For both the nation that transfuses to another as well as the nation that gets the policy transfused, transfusion might happen at various phases of the process of policymaking, including but not limited to planning of the agenda or the schema, forming, followed by legitimation of policy, execution thereof and assessment of the same. The nature and type of emulation depend on various factors that the writing needs to investigate. The circumstance of strategy in various states is one such factor: the more criticalness seen, the almost certain will be the impersonation of arrangements without extended examination and examination. The intrinsic properties of the approach, especially its fungibility and amiability to accurate assessment, will likewise direct how proof concerning programs elsewhere is used.

5 Conclusion, Discussion and Future Research Directions

By using bibliometric and network analysis methods, this study delves into the epistemological edifice of Policy Convergence in the education sector. It also maps the methodological and theoretical progression of research on policy convergence since 1985. The results have helped understand the discourse on diverse literature on policy convergence by recognizing the contributions of the most relevant and significant authors. This study recognizes their input towards Policy Convergence theory and research, which would guide future researchers to build upon the seminal literature. The origin of policy convergence can be attributed to the emergence of policy transfer, globalization and international policy actors who enabled the emulation of policies across multiple geographies. The field of policy convergence in education has received much scholarly interest, evident from the number of publications since the 1980s.

The three most relevant and cited papers focused on integrating factors influencing policy networks and diffusion studies and understanding the dependence of policy networks on policy actors. The co-citation of publications helped reveal broad patterns of scientific knowledge diffusion within and outside the research community of policymakers and scholars. The first cluster emphasized identifying challenges in policy convergence during structuring while providing solutions in the form of education commodification, thus encouraging private players' participation. The second cluster highlighted the influence of external effects on implementing education policies. The third and fourth clusters focused on the development of policy diffusion in terms of understanding problems within policy frameworks and measuring their outcomes.

Broad findings from the clusters hold implications for policymakers and politicians, to establish a power balances in decision making, and direct and indirect investments in the education sector. Policies can further be modified according to reallocation of
resources, which is in line with ICT for development literature. It is clear from bibliometric analysis that reallocating resources would address inequalities in the delivery of knowledge.

This study reviewed the bibliometric structure of the research on policy convergence in education. Scholars can look forward to examining the short-term and long-term impacts of the emulation outcomes in policy convergence. Another area of research could be developing quantifiable outcomes of education policies regarding labour market demand. Researchers can look into the interests of multiple stakeholders involved in policy convergence and find ways to balance their interests together for a harmonized policy outcome in the short and long run.

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