

Mapping global research trends in socioemotional skills interventions: a bibliometric analysis (1970–2025)

Richard Rickie Akat¹, Suziyani Mohamed², Nurul Khairani Ismail²

¹Faculty of Education, Universiti Kebangsaan Malaysia, Bangi, Malaysia

²Centre for Educational and Community Wellbeing Studies, Faculty of Education, Universiti Kebangsaan Malaysia, Bangi, Malaysia

Article Info

Article history:

Received Feb 23, 2026

Revised Apr 10, 2026

Accepted May 14, 2026

Keywords:

Bibliometric analysis
Research trends
Science mapping
Social and emotional learning
Socioemotional skills interventions

ABSTRACT

This study examines global research trends in socioemotional skills interventions through a bibliometric analysis of 687 Scopus-indexed publications (1970–2025). Using Bibliometrix and VOSviewer, the study analyses publication growth, influential contributors, and thematic structures. Results show a sharp increase in publications after 2015, with the United States dominating research output and citation impact. Keyword co-occurrence analysis identifies “social emotional learning” and “socioemotional skills” as the conceptual core, while early childhood and autism-related interventions remain underrepresented. The results reveal a core-periphery knowledge structure dominated by universal school-based frameworks, highlighting critical gaps in population-specific socioemotional intervention research.

This is an open access article under the [CC BY-SA](https://creativecommons.org/licenses/by-sa/4.0/) license.



Corresponding Author:

Suziyani Mohamed

Centre for Educational and Community Wellbeing Studies, Faculty of Education

Universiti Kebangsaan Malaysia

Bangi, 43600, Selangor, Malaysia

Email: suziyani@ukm.edu.my

1. INTRODUCTION

Socioemotional skills are increasingly recognized as a core component of holistic child development, student wellbeing, and academic success [1]–[5]. These competencies, including emotional regulation, social interaction, empathy, and self-awareness, form the foundation of social and emotional learning (SEL) and support learners in managing emotions, building positive relationships, and making responsible decisions in educational and social contexts [6]–[8]. A substantial body of research indicates that socioemotional competence is strongly associated with school readiness, academic engagement, mental health, and long-term social adjustment, particularly during early childhood, which represents a critical developmental period [9], [10]. Globally, SEL has moved from peripheral programming to systemic integration within curricula and early childhood education (ECE) frameworks, reflecting a policy-level commitment to whole-child development across cognitive, social, emotional, and behavioral domains [2], [11]–[13].

Over the past decades, research on socioemotional skills interventions has expanded significantly across interdisciplinary fields such as education, psychology, and developmental science. Empirical studies consistently demonstrate that structured SEL programmes, classroom-based interventions, and school-wide socioemotional initiatives can enhance emotional regulation, prosocial behavior, cooperation, and academic engagement [2], [14]–[16]. In early childhood contexts, socioemotional intervention programs have shown positive effects on self-control, social competence, and cooperative behaviors, underscoring the importance of preventive and developmentally appropriate interventions [17]. Targeted interventions have also been associated with reductions in emotional dysregulation and psychological distress among diverse learner

populations, including students with learning difficulties and developmental conditions [14], [18], [19]. International studies conducted across diverse educational contexts, such as China, India, Japan, the United Arab Emirates, and Finland, further emphasize the critical role of teachers, implementation quality, and contextual factors in determining the effectiveness and sustainability of socioemotional interventions [6], [20], [21]. More recently, the field has expanded to include digital, culturally adaptive, and teacher-mediated approaches across diverse educational settings [20]–[23].

Despite extensive research on socioemotional learning, existing studies lack a comprehensive global mapping of intervention-focused research across time, geography, and thematic development. Previous bibliometric studies are often limited in scope, timeframe, or conceptual focus [24], [25], leaving unclear how socioemotional intervention research has evolved over five decades. As a result, the global evidence base remains fragmented and unevenly distributed, and the conceptual organization of intervention-focused research is insufficiently understood. This limitation constrains theoretical clarity and evidence-informed educational planning, particularly in identifying underrepresented populations and emerging research priorities.

This study provides one of the first comprehensive, intervention-focused bibliometric mappings of socioemotional skills research spanning a five-decade period (1970–2025). Unlike prior studies that broadly examine SEL, this study specifically isolates intervention-based research, enabling a more precise understanding of how socioemotional competencies are operationalized in educational contexts. Importantly, it introduces a novel core–periphery knowledge structure, revealing the dominance of universal school-based interventions alongside the marginalization of early childhood and autism-related contexts. This structural contribution advances the field beyond descriptive mapping by explaining how socioemotional intervention knowledge is systematically organized and unevenly distributed across populations.

Accordingly, the present study aims to conduct a comprehensive bibliometric analysis of global research trends in socioemotional skills interventions using Scopus-indexed publications from 1970 to 2025. Specifically, this study addresses the following research questions (RQ):

- What is the global research landscape of socioemotional skills interventions based on Scopus-indexed publications from 1970 to 2025? (RQ1)
- How have the publication trends and growth patterns in socioemotional skills interventions research evolved over time? (RQ2)
- Who are the most productive and influential authors, countries, and institutions in socioemotional skills interventions research? (RQ3)
- Which highly cited and influential documents demonstrate the greatest scientific impact in socioemotional skills interventions research based on citation indicators? (RQ4)
- What are the major research themes and conceptual structures identified through author keyword (DE) co-occurrence analysis in socioemotional skills interventions research? (RQ5)

2. METHOD

2.1. Research design

This study employed a bibliometric research design to analyze global research trends in socioemotional skills interventions. The analysis focused on publication patterns, influential contributors, and thematic structures within the field. This approach enables a systematic and quantitative examination of the development, structure, and evolution of research within the domain.

2.2. Data source

Data were retrieved from the Scopus database due to its structured indexing and multidisciplinary coverage [26]–[29]. Scopus provides structured bibliographic records suitable for bibliometric analysis. This makes it an appropriate and reliable source for examining global research trends in socioemotional skills interventions across diverse disciplines and contexts.

2.3. Data search strategy

A structured search query was applied to the TITLE field to ensure a high level of relevance and specificity. The search covered the publication period from 1970 to 2025. The search string incorporated key terms related to socioemotional skills and intervention constructs, as presented in Table 1. Only journal articles and review articles indexed in Scopus were included. Other document types, including conference papers, book chapters, editorials, letters, notes, and short surveys, were excluded. The initial search yielded 871 records. After removing duplicates and irrelevant records, a final dataset of 687 publications was retained. The screening and selection process followed a preferred reporting items for systematic reviews and meta-analyses (PRISMA)-adapted framework, as illustrated in Figure 1.

Table 1. The search string and keywords used for query

Database	Search string
Scopus	TITLE ((socioemotional OR "socio-emotional" OR "socioemotional skill*" OR "socio-emotional skill*" OR "social emotional learning" OR "social and emotional learning") AND (intervention* OR "early intervention*" OR teach* OR instructional* OR didactic* OR program*)) AND PUBYEAR > 1969 AND PUBYEAR < 2026 AND (LIMIT-TO (DOCTYPE, "ar") OR LIMIT-TO (DOCTYPE, "re")) Date of access: January 31, 2026

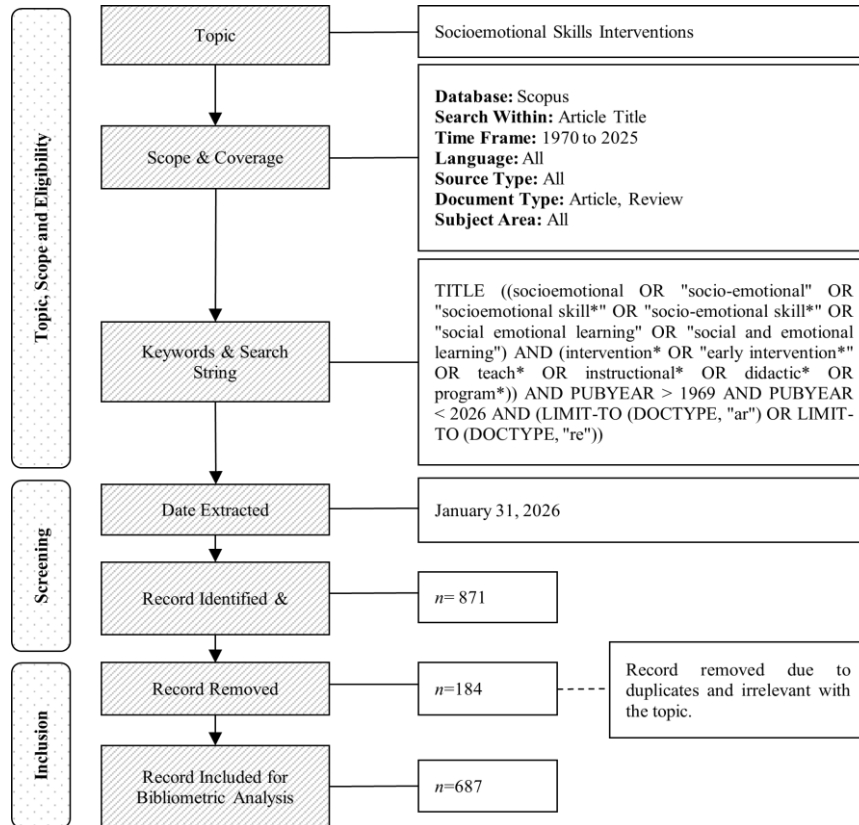


Figure 1. Flow diagram of the data search and screening process adapted from the PRISMA framework for bibliometric analysis [30]–[33]

2.4. Data cleaning and harmonization

The dataset was cleaned and standardized using Microsoft Excel, OpenRefine [34], and biblioMagika [35]. Author names, institutional affiliations, and keywords were harmonized to ensure consistency across records. Keyword standardization involved resolving spelling variations and synonyms.

2.5. Tools and data analysis

The dataset was analyzed using Bibliometrix (R-package) and Biblioshiny [36], and VOSviewer (version 1.6.20). Bibliometrix was used for descriptive and performance analysis, including publication trends, authorship, and citation indicators. VOSviewer was used to construct keyword co-occurrence networks based on DE [37], with index keywords excluded. A threshold of 10 occurrences was applied for keyword analysis, and network normalization used the association strength method. This parameter setting ensures consistency and comparability in network visualization [38]–[40].

3. RESULTS

3.1. Document profile

To address the first research question, the bibliometric analysis presented in Table 2 provides an overview of publication characteristics in socioemotional skills interventions research. The dataset comprises 687 journal and review articles published between 1970 and 2025, involving 2,676 authors, with an average of 3.90 authors per paper. The publications accumulated 20,385 total citations, with an average of 29.67 citations per paper and an h-index of 54.

Table 2. Bibliometric profile of the dataset

Main information	Data
Publication years	1970-2025
Total publications	687
Citable year	57
Number of contributing authors	2676
Number of cited papers	564
Total citations	20,385
Citation per paper	29.67
Citation per cited paper	36.14
Citation per year	370.64
Citation per author	7.62
Author per paper	3.90
Citation sums within h-Core	18,518
h-index	54
g-index	130
m-index	0.947

3.2. Publication trends and growth patterns

To address the second research question, Figure 2 illustrates the annual publication trends in socioemotional skills interventions research from 1970 to 2025. Minimal publication output is observed between 1970 and 2000, followed by gradual growth from 2001 to 2014. A significant increase in publications is observed after 2015, with peak output recorded in 2023–2024.

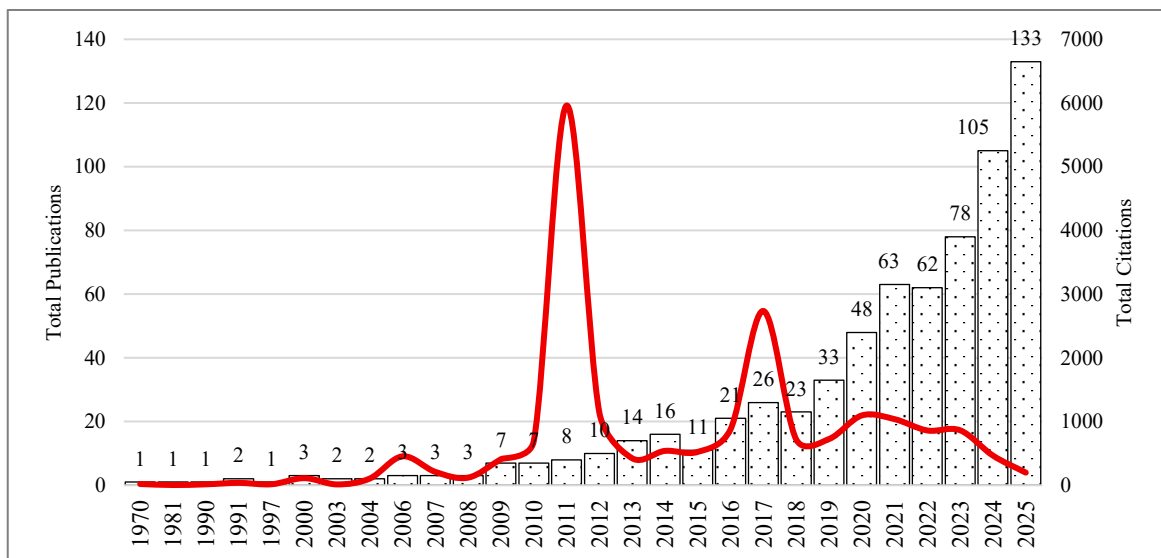


Figure 2. Annual scientific production of socioemotional skills interventions research (1970–2025)

3.3. Most productive authors

To address the third research question, Table 3 presents the most productive authors based on total publications, total citations, and h-index. Coelho, V. A. records the highest number of publications (total number of publications (TP)=12; total citations (TC)=202; h-index (h)=9; m-index (m)=0.692). Elias, M. J. (TC=231; average citations per publication (C/P)=38.50) and Poulou, M. S. (TC=229; C/P=32.71) show higher citation impact relative to publication count. Marques-Pinto, A. (TC=255) and Sousa, V. (TC=184) also demonstrate substantial citation performance.

3.4. Most productive institution

To further address the third research question, Table 4 presents the most productive institutions based on publication and citation indicators. Pennsylvania State University records the highest number of publications (TP=19; TC=820; h=13), followed by the University of California (TP=18) and the University of Lisbon (TP=14). The University of Illinois at Chicago records the highest citation count (TC=7,371; C/P=670.09), while Yale University (C/P=65.00) and Harvard University (C/P=25.38) also show high citation impact.

Table 3. Most productive authors with minimum of six publications

Author's name	Current affiliation	Country	TP	NCP	TC	C/P	C/CP	h	g	m
Coelho, V. A.	Universidade Lusíada Porto	Portugal	12	11	202	16.83	18.36	9	12	0.692
Dyson, B. P.	The University of North Carolina at Greensboro	USA	9	7	55	6.11	7.86	4	7	0.500
Marques-Pinto, A.	University of Lisbon	Portugal	8	8	255	31.88	31.88	7	8	0.500
Sousa, V.	Universidade Lusíada Porto	Portugal	8	8	184	23.00	23.00	8	8	0.615
Poulou, M. S.	University of Patras	Greece	7	7	229	32.71	32.71	7	7	0.333
Martinson, B.	University of Latvia	Latvia	7	6	140	20.00	23.33	4	7	0.400
Howley, D.	Towson University	USA	6	5	39	6.50	7.80	3	6	0.375
Humphrey, N.	The University of Manchester	UK	6	4	24	4.00	6.00	3	4	0.214
DiPerna, J. C.	Pennsylvania State University	USA	6	6	120	2.00	20.00	5	6	0.556
Elias, M. J.	Rutgers University	USA	6	6	231	38.50	38.50	6	6	0.200
Ferreira, M. P. M.	University of Lisbon	Portugal	6	6	149	24.83	24.83	4	6	0.571

Note: NCP=number of cited publications; C/CP=average citations per cited publication; g=g-index.

Table 4. Most productive institutions with a minimum of 10 publications

Affiliation	Country	TP	NCA	NCP	TC	C/P	C/CP	h	g	m
Pennsylvania State University	USA	19	42	19	820	43.16	43.16	13	19	0.481
University of California	USA	18	37	15	402	22.33	26.80	9	18	0.529
University of Lisbon	Portugal	14	26	11	263	18.79	23.91	7	14	0.500
Harvard University	USA	13	25	12	330	25.38	27.50	8	13	0.140
University of Virginia	USA	12	27	11	252	21.00	22.91	8	12	0.222
Académico de Torres Vedras	Portugal	12	17	11	202	16.83	18.36	9	12	0.692
Monash University	Australia	12	35	11	253	21.08	23.00	7	12	0.700
Yale University	USA	11	45	9	715	65.00	79.44	6	11	0.400
University of Illinois at Chicago	USA	11	25	11	7371	670.09	670.09	7	11	0.259
Johns Hopkins University	USA	10	19	9	95	9.50	10.56	5	9	0.139
The University of North Carolina at Greensboro	USA	10	17	8	64	6.40	8.00	5	8	0.625
California State University	USA	10	12	8	324	32.40	40.50	5	10	0.250

Note(s): NCA=number of contributing authors; NCP=number of cited publications; C/CP=average citations per cited publication; g=g-index.

3.5. Country scientific production

To comprehensively address the first and the third research question, Figure 3 presents the global distribution of publications by country. The United States records the highest number of publications (280), followed by Spain (52), Portugal (51), and the United Kingdom (37). Australia contributes a moderate number of publications, while China and India show increasing publication output. Limited representation is observed across Africa, the Middle East, and Latin America.

3.6. Highly cited and influential documents

To address the fourth research question, Table 5 presents the most highly cited documents based on citation indicators. Durlak *et al.* [41] records the highest citation count (TC=5622; citation per year (C/Y)=351.38), followed by Taylor *et al.* [42] (TC=1571). Other highly cited publications include Collie *et al.* [43] and Schonert-Reichl [44]. These publications are primarily published in journals such as Child Development, Psychological Bulletin, and Journal of Educational Psychology.

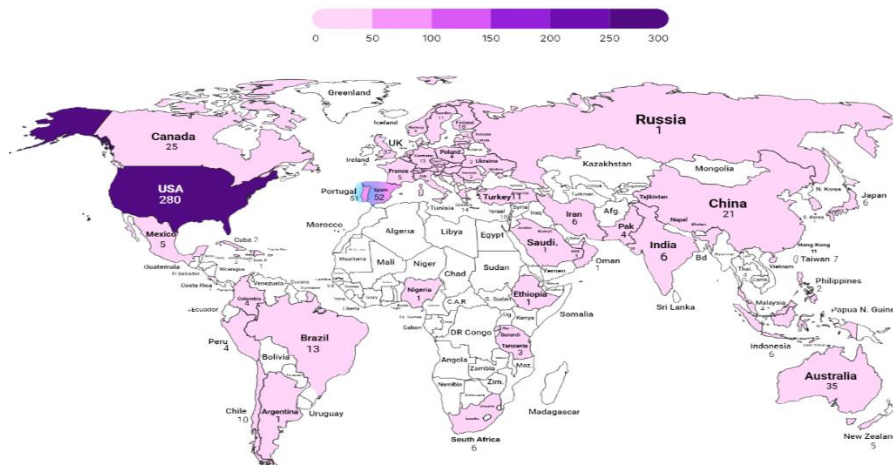


Figure 3. Worldwide scientific production indexed by Scopus on socioemotional skills interventions

Mapping global research trends in socioemotional skills interventions: a ... (Richard Rickie Akat)

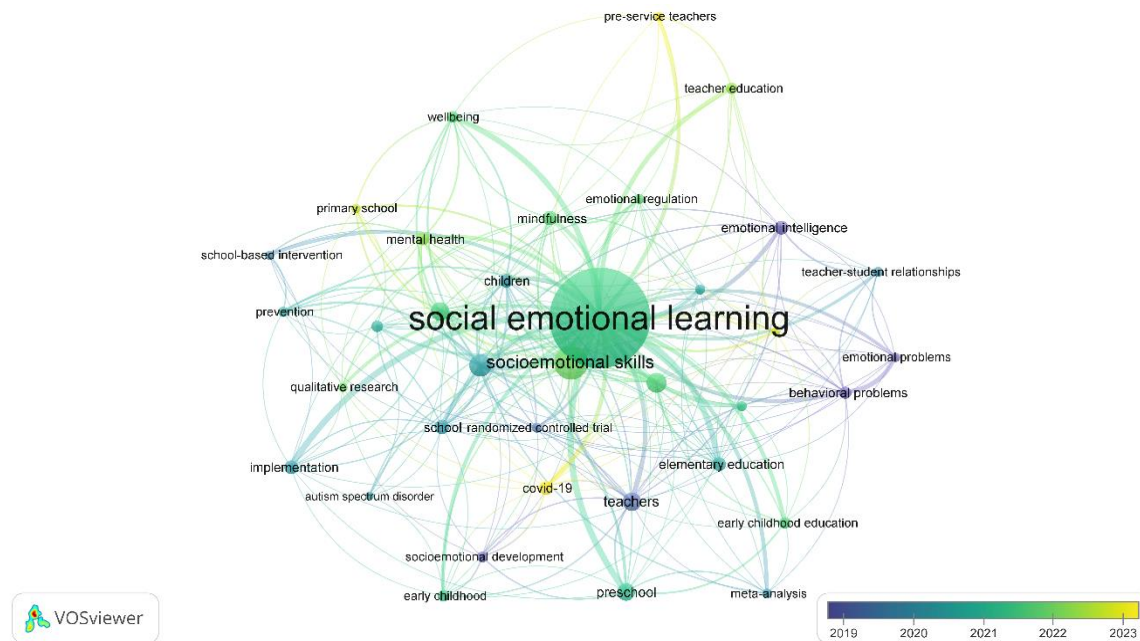


Figure 5. Overlay visualization of the co-occurrence analysis of the DE

4. DISCUSSION

Socioemotional skills interventions research demonstrates sustained growth and increasing citation impact over time, reflecting its consolidation as a prominent research domain. These findings are consistent with prior studies showing that socioemotional learning research is predominantly centered on universal, school-based interventions [46], [49], [51]. Similar patterns of geographical concentration have been reported in recent bibliometric analyses, where research output and influence are largely dominated by Western countries [24], [52], [53]. Comparable trends have also been identified in broader reviews of socioemotional learning implementation across educational systems, which highlight the institutionalization of SEL within formal schooling contexts [1], [13]. In addition, previous studies highlight the limited integration of socioemotional interventions in early childhood and special education contexts, particularly for children with ASD [18], [54]. These consistencies reinforce the structural imbalance identified in the present study and emphasize the need for more inclusive and diversified research directions.

The field remains structurally concentrated, with highly cited meta-analytical and large-scale studies shaping dominant research directions. While this strengthens the evidence base, it also limits thematic diversification. This concentration is reflected in the geographical distribution of research, which is largely centered in the United States and Western Europe, with limited representation from other regions. Similar concerns have been raised in global education research, indicating that dominant intervention frameworks are often developed within specific socio-cultural contexts and may not fully reflect diverse educational realities [6], [11], [20], [55]. This uneven distribution indicates that dominant theoretical frameworks and intervention models are shaped within specific cultural and institutional contexts.

Keyword co-occurrence analysis reinforces these patterns, with “social emotional learning” and “socioemotional skills” forming the conceptual core of the field. These are closely associated with themes such as teacher education, emotional regulation, and mental health, consistent with prior empirical and systematic review findings [3], [16], [19]. In contrast, early childhood and autism-related interventions remain comparatively underrepresented, as also highlighted in studies focusing on specialized populations and developmental conditions [7], [18], [54]. These findings indicate that the field has reached a mature stage but remains structurally concentrated and uneven across contexts [52], [54]. This structural imbalance has important implications for global education policy and practice, particularly in advancing inclusive and equitable learning systems aligned with international priorities such as sustainable development goal 4, which emphasizes inclusive and quality education for all learners. Accordingly, future research must prioritize culturally responsive and population-specific socioemotional interventions, particularly in early childhood and autism-related contexts, to enhance global applicability and equitable educational outcomes.

5. THEORETICAL CONTRIBUTION

This study contributes to the literature in three key ways. First, it identifies a core-periphery knowledge structure in which universal school-based interventions dominate, while early childhood and autism-related research remain peripheral. This finding provides a structural explanation of how socioemotional intervention knowledge is unevenly distributed across populations. Second, the study highlights the geographical concentration of knowledge production, revealing the dominance of Western countries in shaping research directions and theoretical frameworks. This pattern suggests that existing frameworks may reflect specific socio-cultural contexts rather than global diversity. Third, it extends socioemotional learning theory by integrating bibliometric mapping with knowledge structure analysis. This integration offers a more comprehensive understanding of how intervention research evolves and informs future theoretical and empirical development.

6. CONCLUSION

This study maps global research trends in socioemotional skills interventions and identifies critical structural gaps, particularly the underrepresentation of early childhood settings and autism-related contexts. The findings highlight the need for more inclusive, context-sensitive, and population-specific intervention research to support equitable educational development. Future research must prioritize longitudinal, culturally responsive, and intervention-based studies, particularly in early childhood and ASD contexts. In addition, interdisciplinary approaches integrating educational, psychological, and technological perspectives are needed to enhance intervention effectiveness. Expanding research beyond dominant Western contexts will be essential to achieving a more balanced and globally representative evidence base.

ACKNOWLEDGMENTS

This study forms part of a broader research initiative, and the authors are deeply grateful to all institutions and individuals whose support, encouragement, and professional insights have contributed to the successful completion of this study.

FUNDING INFORMATION

The authors extend sincere appreciation to the Faculty of Education, Universiti Kebangsaan Malaysia and the Ministry of Education Malaysia (KPM.BT.700-30/24/91(6)) for their institutional support.

AUTHOR CONTRIBUTIONS STATEMENT

This journal uses the Contributor Roles Taxonomy (CRediT) to recognize individual author contributions, reduce authorship disputes, and facilitate collaboration.

Name of Author	C	M	So	Va	Fo	I	R	D	O	E	Vi	Su	P	Fu
Richard Rickie Akat	✓	✓	✓		✓	✓	✓	✓	✓	✓			✓	✓
Suziyani Mohamed	✓	✓		✓		✓		✓		✓	✓	✓	✓	
Nurul Khairani Ismail	✓			✓		✓		✓		✓	✓	✓	✓	

C : Conceptualization

M : Methodology

So : Software

Va : Validation

Fo : Formal analysis

I : Investigation

R : Resources

D : Data Curation

O : Writing - Original Draft

E : Writing - Review & Editing

Vi : Visualization

Su : Supervision

P : Project administration

Fu : Funding acquisition

CONFLICT OF INTEREST STATEMENT

The authors declare no conflict of interest.

INFORMED CONSENT

This study is based on bibliographic data retrieved from the Scopus database and does not involve human participants; therefore, informed consent is not applicable.

ETHICAL APPROVAL

Ethical approval is not applicable for this article.

DATA AVAILABILITY

The bibliographic data supporting this study were retrieved from the Scopus database. The search string and screening procedure are reported in the Methods section.

REFERENCES




- [1] S. B. Nanda, D. Satapathy, G. Panda, and D. K. Pradhan, "Socio-emotional learning and competencies in 21st-century education: a systematic review of teacher and student perspectives," *Discover Education*, vol. 4, no. 1, p. 338, Sep. 2025, doi: 10.1007/s44217-025-00796-w.
- [2] R. Hosokawa and R. Tomozawa, "Effectiveness of a social-emotional learning basic course in fostering social-emotional skills in young children: an intervention study," *Child Protection and Practice*, vol. 8, p. 100286, Mar. 2026, doi: 10.1016/j.chipro.2026.100286.
- [3] J. H. Lim, E. Rho, and C. Yang, "Evidence-based practices of culturally responsive social and emotional learning (SEL) programs: a systematic review and meta-analysis," *School Psychology Review*, pp. 1–16, Nov. 2024, doi: 10.1080/2372966x.2024.2432853.
- [4] V. L. DeSensi, "Embedding social and emotional learning (SEL) design to support college student well-being and learning outcomes: a review of the relevant literature," *Journal of the National Organization for Student Success*, vol. 1, no. 1, pp. 70–78, Sep. 2024, doi: 10.61617/jnoss.25.
- [5] B. Martinsone, C. Simões, L. Camilleri, E. Conte, and P. Lebre, "Students' Socio-emotional skills and academic outcomes after the PROMEHS program: a longitudinal study in two European countries," *Behavioral Sciences*, vol. 15, no. 11, p. 1529, Nov. 2025, doi: 10.3390/bs15111529.
- [6] H. Sheel, L. Suárez, and N. V. Marsh, "Assessing social and emotional learning of children in India: perspectives from parents and teachers," *Acta Psychologica*, vol. 262, p. 106052, Feb. 2026, doi: 10.1016/j.actpsy.2025.106052.
- [7] T. B. A. Tuncdemir, "Integrating social-emotional learning through play: perspectives from early childhood educators," *Journal of Research in Childhood Education*, pp. 1–19, Oct. 2025, doi: 10.1080/02568543.2025.2567504.
- [8] E. Arbués, B. Abad-Villaverde, A. Costa-París, A. Balaguer, M. D. Conesa-Lareo, and C. Beltramo, "Socio-emotional competencies for sustainable development: an exploratory review," *Education Sciences*, vol. 15, no. 7, p. 831, Jul. 2025, doi: 10.3390/educsci15070831.
- [9] K. Józsa, D. Borbélyová, A. Nagyová, and T. Z. Oo, "Understanding socioemotional and behavioral difficulties in early primary education: a multi-informant approach to teacher–parent agreement and the role of child and family characteristics," *Education Sciences*, vol. 15, no. 11, p. 1440, Oct. 2025, doi: 10.3390/educsci15111440.
- [10] C. Blewitt *et al.*, "'It's embedded in what we do for every child': a qualitative exploration of early childhood educators' perspectives on supporting children's social and emotional learning," *International Journal of Environmental Research and Public Health*, vol. 18, no. 4, pp. 1–16, Feb. 2021, doi: 10.3390/ijerph18041530.
- [11] S. Ahmad, V. Pillai, S. Ravindranath, P. Sinha, S. S. Mashhadi, and V. Talreja, "Perceptions, challenges and opportunities of system-level social emotional learning interventions in India," *Social and Emotional Learning: Research, Practice, and Policy*, vol. 7, p. 100171, Jun. 2026, doi: 10.1016/j.sel.2025.100171.
- [12] L. Murray *et al.*, "Supporting young children's social–emotional wellbeing in early childhood education and care: perspectives from the sector," *Education Sciences*, vol. 15, no. 5, p. 569, May 2025, doi: 10.3390/educsci15050569.
- [13] Organisation for Economic Co-operation and Development (OECD), *Nurturing social and emotional learning across the globe: findings from the OECD survey on social and emotional skills 2023*. Paris: OECD Publishing, 2024, doi: 10.1787/32b647d0-en.
- [14] S. Nemat, R. B. Gargari, M. Rasi, and E. Mahmoudi, "Effectiveness of social-emotional learning program on psychological distress and dysregulation in students with specific learning disorders," *BMC Psychology*, vol. 13, no. 1, p. 1386, Dec. 2025, doi: 10.1186/s40359-025-03662-4.
- [15] S. Hassani, "Fostering social-emotional competencies to improve social functioning, social inclusion, and school well-being: results of a cluster non-randomized pilot study," *Mental Health and Prevention*, vol. 36, p. 200365, Dec. 2024, doi: 10.1016/j.mhp.2024.200365.
- [16] E. K. Kim, J. P. Allen, and S. R. Jimerson, "Supporting student social emotional learning and development," *School Psychology Review*, vol. 53, no. 3, pp. 201–207, May 2024, doi: 10.1080/2372966x.2024.2346443.
- [17] M. C. Mustafa, "Cultivating resilience and self-regulation in Malaysian early childhood education: bridging cultural insights and educational practices," *Acta Psychologica*, vol. 261, p. 105941, Nov. 2025, doi: 10.1016/j.actpsy.2025.105941.
- [18] R. Lievore, G. Crisci, and I. C. Mammarella, "Emotion recognition in children and adolescents with ASD and ADHD: a systematic review," *Review Journal of Autism and Developmental Disorders*, vol. 12, no. 3, pp. 535–565, Sep. 2025, doi: 10.1007/s40489-023-00407-0.
- [19] H. Adynski, C. Propper, L. Beeber, J. H. Gilmore, B. Zou, and H. P. Santos, "The role of emotional regulation on early child school adjustment outcomes," *Archives of Psychiatric Nursing*, vol. 51, pp. 201–211, Aug. 2024, doi: 10.1016/j.apnu.2024.07.003.
- [20] L. Fu, Y. Yang, and A. Bouris, "Barriers and facilitators to implementing a school-based social and emotional learning program for rural children in China: a qualitative study using the consolidated framework for implementation research," *Administration and Policy in Mental Health and Mental Health Services Research*, vol. 52, no. 6, pp. 1199–1218, Nov. 2025, doi: 10.1007/s10488-025-01460-z.
- [21] M. Talvio and J. Vuorinen, "Enhancing social and emotional learning: insights from student teacher reflections in the UAE and Finland," *Behavioral Sciences*, vol. 16, no. 1, p. 88, Jan. 2026, doi: 10.3390/bs16010088.
- [22] B. Ö. Beceren, C. Baydemir, and C. A. Arat, "Exploring preschool teachers' perspectives on social and emotional learning in early childhood: a qualitative inquiry," *Journal of Pedagogical Research*, vol. 9, no. 5, pp. 180–196, Nov. 2025, doi: 10.33902/JPR.202534890.

- [23] G. Z. Chen, Y. Fan, and Z. Liao, "Integrating digital cultural detective games with social emotional learning to foster cultural sensitivity and intercultural empathy among kindergarten teachers: a mixed-methods study," *Frontiers in Psychology*, vol. 16, p. 1717522, Jan. 2026, doi: 10.3389/fpsyg.2025.1717522.
- [24] N. L. S. Martín, E. G. Z. Valenzuela, T. A. B. Silva, Y. A. Anabalón, and V. López-López, "Social-emotional education programs for primary education: bibliometric and thematic analysis (2010–2020)," *Environment and Social Psychology*, vol. 9, no. 4, pp. 1–10, Jan. 2024, doi: 10.54517/esp.v9i4.2222.
- [25] T. Pushpanathan, M. S. Nidhya, M. Maniruzzaman, C. Vairavan, and V. Saravanan, "From emotion to acquisition: a bibliometric overview of social emotional learning in second language acquisition (SLA) research," *Australian Journal of Applied Linguistics*, vol. 8, no. 5, p. 102843, Dec. 2025, doi: 10.29140/ajal.v8n5.102843.
- [26] R. N. Broadus, "Toward a definition of 'bibliometrics,'" *Scientometrics*, vol. 12, no. 5–6, pp. 373–379, Nov. 1987, doi: 10.1007/BF02016680.
- [27] S. Kraus *et al.*, "Literature reviews as independent studies: guidelines for academic practice," *Review of Managerial Science*, vol. 16, no. 8, pp. 2577–2595, Nov. 2022, doi: 10.1007/s11846-022-00588-8.
- [28] D. Mukherjee, W. M. Lim, S. Kumar, and N. Donthu, "Guidelines for advancing theory and practice through bibliometric research," *Journal of Business Research*, vol. 148, pp. 101–115, Sep. 2022, doi: 10.1016/j.jbusres.2022.04.042.
- [29] A. S. McKay, "Common errors in bibliometric reviews and a novel method for correcting them," *Scientometrics*, vol. 131, no. 1, pp. 753–791, Jan. 2026, doi: 10.1007/s11192-026-05544-x.
- [30] A. Ahmi, A. Yau, and M. H. Miraz, "Carbon taxation as a catalyst for sustainable development: insights from five decades of global research," *Sustainability Accounting, Management and Policy Journal*, vol. 17, no. 2, pp. 456–483, Feb. 2026, doi: 10.1108/SAMPJ-04-2024-0327.
- [31] D. Moher, A. Liberati, J. Tetzlaff, and D. G. Altman, "Preferred reporting items for systematic reviews and meta-analyses: the PRISMA statement," *International Journal of Surgery*, vol. 8, no. 5, pp. 336–341, 2010, doi: 10.1016/j.ijssu.2010.02.007.
- [32] M. J. Page *et al.*, "The PRISMA 2020 statement: an updated guideline for reporting systematic reviews," *Journal of Clinical Epidemiology*, vol. 134, pp. 178–189, Jun. 2021, doi: 10.1016/j.jclinepi.2021.03.001.
- [33] N. Kushairi and A. Ahmi, "Flipped classroom in the second decade of the Millenia: a bibliometrics analysis with Lotka's law," *Education and Information Technologies*, vol. 26, no. 4, pp. 4401–4431, Jul. 2021, doi: 10.1007/s10639-021-10457-8.
- [34] A. Ahmi, "OpenRefine: an approachable tool for cleaning and harmonizing bibliographical data," in *11th International Conference on Applied Science and Technology 2022 (11th ICAST 2022) AIP Conference Proceeding*, 2023, p. 030006, doi: 10.1063/5.0164724.
- [35] A. Ahmi, "BiblioMagika." Accessed: Nov. 23, 2025. [Online]. Available: <https://bibliomagika.com>
- [36] M. Aria and C. Cuccurullo, "Bibliometrix: an R-tool for comprehensive science mapping analysis," *Journal of Informetrics*, vol. 11, no. 4, pp. 959–975, Nov. 2017, doi: 10.1016/j.joi.2017.08.007.
- [37] H. Arruda, E. R. Silva, M. Lessa, D. Proença Jr., and R. Bartholo, "VOSviewer and Bibliometrix," *Journal of the Medical Library Association*, vol. 110, no. 3, pp. 392–395, Dec. 2022, doi: 10.5195/jmla.2022.1434.
- [38] A. Klarin, "How to conduct a bibliometric content analysis: guidelines and contributions of content co-occurrence or co-word literature reviews," *International Journal of Consumer Studies*, vol. 48, no. 2, p. e13031, Mar. 2024, doi: 10.1111/ijcs.13031.
- [39] B. Y. Mohammed, N. A. Khalifa, S. J. S. Hakim, S. Shahidan, and S. Ali, "Bibliometric analysis of GIS studies for bridge management: trends, challenges, and future directions," *Applied Geomatics*, vol. 18, no. 1, p. 35, Mar. 2026, doi: 10.1007/s12518-025-00683-x.
- [40] A. Kirby, "Exploratory bibliometrics: using VOSviewer as a preliminary research tool," *Publications*, vol. 11, no. 1, p. 10, Feb. 2023, doi: 10.3390/publications11010010.
- [41] J. A. Durlak, R. P. Weissberg, A. B. Dymnicki, R. D. Taylor, and K. B. Schellinger, "The impact of enhancing students' social and emotional learning: a meta-analysis of school-based universal interventions," *Child Development*, vol. 82, no. 1, pp. 405–432, Jan. 2011, doi: 10.1111/j.1467-8624.2010.01564.x.
- [42] R. D. Taylor, E. Oberle, J. A. Durlak, and R. P. Weissberg, "Promoting positive youth development through school-based social and emotional learning interventions: a meta-analysis of follow-up effects," *Child Development*, vol. 88, no. 4, pp. 1156–1171, Jul. 2017, doi: 10.1111/cdev.12864.
- [43] R. J. Collie, J. D. Shapka, and N. E. Perry, "School climate and social-emotional learning: predicting teacher stress, job satisfaction, and teaching efficacy," *Journal of Educational Psychology*, vol. 104, no. 4, pp. 1189–1204, Nov. 2012, doi: 10.1037/a0029356.
- [44] K. A. Schonert-Reichl, "Social and emotional learning and teachers," *The Future of Children*, vol. 27, no. 1, pp. 137–155, 2017, doi: 10.1353/foc.2017.0007.
- [45] M. H. van IJzendoorn and F. Juffer, "The Emanuel Miller memorial lecture 2006: adoption as intervention. meta-analytic evidence for massive catch-up and plasticity in physical, socio-emotional, and cognitive development," *Journal of Child Psychology and Psychiatry*, vol. 47, no. 12, pp. 1228–1245, Dec. 2006, doi: 10.1111/j.1469-7610.2006.01675.x.
- [46] C. Cipriano *et al.*, "The state of evidence for social and emotional learning: a contemporary meta-analysis of universal school-based SEL interventions," *Child Development*, vol. 94, no. 5, pp. 1181–1204, Sep. 2023, doi: 10.1111/cdev.13968.
- [47] K. L. Bierman *et al.*, "The effects of a multiyear universal social-emotional learning program: the role of student and school characteristics," *Journal of Consulting and Clinical Psychology*, vol. 78, no. 2, pp. 156–168, Apr. 2010, doi: 10.1037/a0018607.
- [48] J. A. Durlak, J. L. Mahoney, and A. E. Boyle, "What we know, and what we need to find out about universal, school-based social and emotional learning programs for children and adolescents: a review of meta-analyses and directions for future research," *Psychological Bulletin*, vol. 148, no. 11–12, pp. 765–782, Nov. 2022, doi: 10.1037/bul0000383.
- [49] M. Wigelsworth *et al.*, "The impact of trial stage, developer involvement and international transferability on universal social and emotional learning programme outcomes: a meta-analysis," *Cambridge Journal of Education*, vol. 46, no. 3, pp. 347–376, Jul. 2016, doi: 10.1080/0305764X.2016.1195791.
- [50] K. A. Arbeau, R. J. Coplan, and M. Weeks, "Shyness, teacher-child relationships, and socio-emotional adjustment in grade 1," *International Journal of Behavioral Development*, vol. 34, no. 3, pp. 259–269, May 2010, doi: 10.1177/0165025409350959.
- [51] D. Hayes *et al.*, "Universal, school-based, interventions to improve emotional outcomes in children and young people: a systematic review and meta-analysis," *Frontiers in Child and Adolescent Psychiatry*, vol. 4, p. 1526840, Jun. 2025, doi: 10.3389/frcha.2025.1526840.
- [52] M. Alemdar, "Mapping the evolution of social and emotional learning research in primary education contexts: a bibliometric and thematic analysis," *Journal of Intelligence*, vol. 13, no. 9, p. 123, Sep. 2025, doi: 10.3390/jintelligence13090123.
- [53] W. Wider *et al.*, "Mapping the terrain of social-emotional learning: a bibliometric study on its past, present, and future," *School Mental Health*, vol. 17, no. 3, pp. 1097–1112, Sep. 2025, doi: 10.1007/s12310-025-09781-y.




- [54] A. Gardner, M. Wong, and B. Ratcliffe, "Social-emotional learning for adolescents on the autism spectrum: high school teachers' perspectives," *Australasian Journal of Special and Inclusive Education*, vol. 45, no. 1, pp. 18–33, Jul. 2021, doi: 10.1017/jsi.2020.13.
- [55] M. S. Uddin, E. Sofija, N. Rahman, S. Hossain, and P. Harris, "Effectiveness of school-based interventions to improve mental health and wellbeing of students: an umbrella review," *International Journal of Health Promotion and Education*, pp. 1–39, Mar. 2026, doi: 10.1080/14635240.2026.2649630.

BIOGRAPHIES OF AUTHORS






Richard Rickie Akat    is a Ph.D. candidate at Universiti Kebangsaan Malaysia (UKM). He is the recipient of a Ministry of Education Malaysia scholarship. He earned his bachelor's degree from the Universiti Malaysia Sarawak (UNIMAS), a post-graduate Teaching Diploma from Institute of Teacher Education Tun Abdul Razak Campus, Samarahan, Sarawak (IPGKTAR) and a master's degree from Universiti Kebangsaan Malaysia (UKM). His research interests include design and development research (DDR), particularly for module development, early childhood education, and special educational needs, especially for preschool children with autism spectrum disorder. Driven by a passion for inclusive education and meaningful pedagogical practice, his work seeks to bridge research and real-world classroom applications. He can be contacted at email: richardrickieakat@gmail.com; p147331@siswa.ukm.edu.my.



Suziyani Mohamed    is an associate professor at the Centre for Educational and Community Well-being, Faculty of Education, Universiti Kebangsaan Malaysia (UKM). She holds a Ph.D. and Master's in Preschool Education from UKM, obtained in 2014 and 2008, respectively. Her research focuses on early childhood education, socioemotional development, autism spectrum disorder, and teacher professional development. She has published extensively in high-impact journals indexed in Scopus and WoS, and has contributed to the design and evaluation of socioemotional learning modules for preschool children, including those with special needs. She has led and collaborated on multiple research grants, served as a keynote speaker, and received awards such as the UKM Excellence in Teaching Award and Best Article Award at ICCEW 2024. She can be contacted at email: suziyani@ukm.edu.my.



Nurul Khairani Ismail    is a lecturer at the Centre for Educational and Community Well-being, Faculty of Education, Universiti Kebangsaan Malaysia (UKM). She obtained her Ph.D. in Preschool Education from UKM in 2021, and both her master's and bachelor's degrees in Educational Psychology from the International Islamic University Malaysia (IIUM) in 2015 and 2011, respectively. Her research interests include early childhood education, design and development research (DDR), moral and character development, and mental health in preschool settings. She has been actively involved in national and university-funded projects, including studies on teacher–child relationships and mental health interventions for young learners. She has contributed to several peer-reviewed publications, conference proceedings, and collaborative research modules. She can be contacted at email: nkhairani@ukm.edu.my.