Journal of School Administration

Vol 12, No 2, Summer 2024

ISSN: 2538 - 4724

University of Kurdistan

Bibliometric Analysis on Classroom Management in the 21st Century (2000-2023)

Amir Karimi[1*], Kourosh Fathi[2], Saeedeh Raghimi[3]

ARTICLE INFO
Article history:

Received:
08/02/2024

Accepted:
29/06/2024

Available online:
Summer 2024

Keyword:

School administration, classroom management, bibliometric analysis.

Abstract

This study aims to review and analyze the literature in the field of classroom management, given the growth and development of papers in this field in the global scientific community. The bibliometric technique was applied in the investigation, and every scientific publication from 2000 to 2023 is indexed in the Science Direct citation database. After screening the articles, 788 were analyzed, and the data was shown using the VOSviewer program. The historical growth pattern in scientific productions shows a minor decline in 2003, followed by a generally rising trend between 2004 and 2014. The highest number of articles was produced in 2014, with a peak in 2014. The most important keywords are teacher education, higher education, motivation, professional development, self-efficacy, and classroom management teachers. The most important categories in academic literature are education, teacher education, and higher education. The study's emphasis may need to change due to the system's connection to these areas.

Karimi, A., Fathi,. K.,& ,Raghimi, S., (2024) Bibliometric Analysis on Classroom Management in the 21st Century (2000-2023), Journal of School Administration, 12(2),15 - 33 .

1. Research lecturer of history education, Farhangian University, Alborz campus, P.O. Box 14665-889, Tehran, Iran.
*Corresponding Author Emai: amirkarimizanjani1379@gmail.com
2. Department of History, Farhangian University faculty member (Assistant Professor)
3. Educational Sciences department, Payam Noor University, Tehran

Introduction

A crucial component of education is classroom management, which aims to establish and maintain an atmosphere that promotes efficient learning (Arshad et al., 2018; Demirdag, 2015). Teachers must set clear expectations, foster positive relationships, communicate effectively, plan (Goss, 2022), enforce consistent and fair discipline, establish routines and procedures in the classroom, differentiate instruction, provide positive reinforcement (Jobirovna, 2023; Wilkins et al., 2023), and respond to changing needs in the school (Sanusi et al., 2022).

These components foster student participation and make the most of class time by establishing a constructive, effective, and organized learning environment (Rubtsova et al., 2020). Having clear standards helps set a disciplined classroom where kids know what is expected of them and develop solid connections (Kincade et al., 2020; White, 2020), promoting an inclusive and supportive learning environment. Besides, good communication ensures that teachers explain expectations, give directions, and give feedback in a way that students can understand.

Teachers who engage in proactive planning anticipate students' needs, create engaging lesson plans, and organize classes with knowledge of potential obstacles and interruptions (Inganah et al., 2023; Jeong & So, 2020). When behavioral problems occur, fair and consistent discipline is implemented, emphasizing learning and development (Jumiaty & Kuswoyo, 2023). Diverse learning styles, aptitudes, and interests are accommodated through differentiated education (Demir, 2021). Through praise and incentives, positive reinforcement promotes positive conduct, and responsive classroom management adjusts to the particular requirements of each student and deals with unforeseen circumstances with adaptability and problem-solving abilities (Chen et al., 2020; Liang & Cao, 2021).

In the twenty-first century, classroom management is crucial for several reasons. Effective teaching and learning environments, learning environment optimization (Cheung et al., 2021), student engagement, addressing diverse learning needs (Hepburn et al., 2021; Page et al., 2021), future readiness, technology integration, social and emotional skill development (Kilag et al., 2023), minimizing disruptions, positive classroom culture, adapting to changing educational strategies, and lifelong learning habits (Caldera et al., 2020; Martin, 2021), are all made possible by it. Since many different teaching philosophies and technological tools are available in the twenty-first century, a well-run classroom must use these resources for learning. Several other essential advantages of a well-run classroom are active student participation and engagement in various learning activities. Equal opportunity for achievement for all students is ensured by classroom management that considers varied learning requirements, with a primary focus on inclusive education (Finkelstein et al., 2021).

To prepare children for the future, well-managed classrooms must foster academic excellence, critical thinking, cooperation, and problem-solving abilities.

Effective classroom management makes covering the curriculum more accessible and satisfying learning objectives by reducing interruptions and maximizing teaching time. Creating a welcoming environment in the classroom helps kids feel like they belong and are in good health, both of which are vital for academic achievement. In the twenty-first century, adjusting to evolving techniques and strategies in education is critical. Teachers can adapt to new pedagogical approaches, collaborative learning models, and creative teaching techniques with an effective classroom management system in place. Given the emphasis on continual learning in the twenty-first century, it is imperative to instill a lifetime learning habit. Classroom management is essential to successful teaching and learning because it fosters children's intellectual, social, and emotional growth in a rapidly changing world.

In the meantime, research on bibliometrics is essential to comprehending contemporary developments in education. Research mapping, topic identification, policy and decision-making (Li et al., 2022), collaboration and network tracking, impact and visibility assessment (Tomaszewski, 2023), productivity evaluation, evidence-based practice facilitation, interdisciplinary research promotion (Ryazanova & Jaskiene, 2022), support for innovation and adaptation, and knowledge transfer are all aided by it. Bibliometric studies assist educators, policymakers, and practitioners in making well-informed decisions about curriculum creation, resource allocation, and the incorporation of innovative educational methods by identifying important publications and prominent academics.

This study aims to pinpoint areas of deficiency in scholarly research and regions of intense research activity within the domain of classroom management. Such an analysis guides both researchers and educators in identifying the directions for future research endeavors and staying abreast of the most recent advancements and debates in the field, thereby contributing to the enhancement of both theoretical understanding and practical application in classroom management.

Literature review

To bridge the science-practitioner divide in education and psychology/psychiatry, the study by Dort et al. (2020) focuses on classroom management

methods (CMS) that are supported by research and work well for kids with ADHD. According to the study, there is a dearth of information that both sectors exchange, with teachers' viewpoints mostly coming from education and most research from psychology and psychiatry. According to the review, further study is required to bridge the gaps between scientific domains and concentrate on impediments and strategies for implementation.

Bozkus's (2021) review study uses the Web of Science to examine research trends in classroom management. It displays descriptive data, output, widely read articles, and the expansion of prestigious journals. Over three decades, content analysis reveals shifts in participants, goals, and techniques. The study's findings indicate that while research on classroom management is not widely available, interest in the topic is expanding.

To determine essential theories, approaches, and subjects in research-based knowledge for teacher educators and student teachers, a Hakvoort et al. (2019) bibliometric analysis was carried out. After reviewing 608 papers from 197 notable writers between 1996 and 2010 and 2011 and 2015, the study identified four authors from period two and seven clusters of authors from period one. Mapping the research field is the goal of this study.

Classroom conversation has shown steady development in publications and citations over the past 20 years, with the USA making a significant contribution, according to a Song et al. (2019) bibliometric review of 3914 papers published between 1999 and 2018. Recurrent and rising keywords disclosed by thematic aspects indicated research hotspots for academics and practitioners.

In research by Hallinger & Kovačević (2019), Science mapping is used to comprehend how research in educational administration (EA) has evolved. Twenty-two thousand three hundred sixty-one peer-reviewed publications published between 1960 and 2018 are identified, demonstrating a notable expansion of the EA knowledge base since 1960. The review also determines four significant schools of thought, emphasizing leading teachers, school effectiveness and improvement, leadership and cultural change, and leadership for learning. The results imply that throughout the last 60 years, "school leadership" has replaced "school administration."

Fathi et al. (2023) aim to review and analyze the growing literature on school administration within the global scientific community. Employing a descriptive methodology, it encompasses all scientific articles indexed in the Science Direct database from 2000 to 2023. After filtering, 2670 articles were analyzed using VOSviewer software. The findings show a rise in articles since 2004, peaking in 2023, with "Procedia - Social and Behavioral Sciences" leading in publications. The research identified 5 clusters, revealing diversity in leadership, education, professional development, and emerging themes like COVID-19, teacher self-efficacy, and technology integration. Besides, other researchers use the same method in other fields of education (Rahmati et al., 2024; Rahmati and Karimi, 2022).

The evaluated research works highlight the importance of multidisciplinary collaboration and the growth of educational research over time, and together, they provide light on some topics related to classroom management, teacher education, and educational administration. These research studies highlight the dynamic character of academic research, the value of interdisciplinary cooperation, and the necessity of continual investigation and information sharing in fields like instructional design, teacher preparation, and educational administration. The results direct future research and instructional strategies and advance our understanding of these subjects.

Research Items

Reviewing the scientometrics of the articles published in "Classroom Management" is the aim of this article. To this end, it addresses the following research items:

A. The growth trend of scientific productions
B. The frequency of articles published in various publications
C. Frequency of the most critical and frequent keywords
D. Network visualization
E. Overly visualization

Methodology

Bibliometric analysis

The purpose of using scientometric methods in the field of classroom management is to provide reliable and valid data that can inform the creation of information facilities, define existing limitations within the subject area, show the relative importance of different types of documents across different subject areas, and aid in making decisions about the use of informational materials and resources. This approach helps researchers, educators, and policymakers to understand the landscape of classroom management research, identify key contributors and influential studies, and guide the allocation of resources for further research and educational practices.

Scientific approaches and social network analysis tools are used in the current investigation. The Science Direct scientific database data were collected using the network drawing tool in VOSviewer and Excel software to generate a comprehensive and

multidisciplinary citation profile. This scientific database contains papers and the study's statistical population published between 2000 and 2023. (March 2, 2023). Using the keywords "classroom management," 965 articles were found first; however, many more were later eliminated for lack of relevance. Words that were similar, identical, plural, and singular were combined utilizing the constraints of the document type (Reamd JA), language (EN), and period (2000–2023); 788 files were then submitted, which 203 of them were Open access & Open archive.

Finally, the expert option was used to extract and load seven RIS files into the VOSviewer application. VOSviewer software is being used more often in bibliographic research. This application was developed by Van Eck and Waltman (2009) to make it

Search strategy and data collection

easier to construct and see easily understood bibliometric maps (Kaushik & Dangwal, 2023; McAllister et al., 2022).

VOSviewer has three additional viewing options: overlay, network, and density visualization (Oyewola & Dada, 2022). The researchers used network visualization to categorize the data based on co-words, co-authorship, or country of origin (Khaldi & Prado-Gascó, 2021). It also shows published subjects and related keywords. In addition, the study is categorized by color according to how well-liked and comparable it is. The color of the line linking terms changes in the color index when a phrase is used repeatedly in several studies; on the other hand, if the color is bright, it suggests little relationship between them.

Table 1. Keywords Searching

Retrieval Date	02/03/2024
Search Field	All parts
Database	Science Direct: 788
Inclusion criteria	"class management"
Exclusion criteria	1. 965 articles were found by using the keywords 2. 801 articles were found by using the document type limitation (Re and JA) 3. 800 articles were found by using the language limitation (EN) 4. 788 articles were found by using the time limitation (2000-2023)

Results

A) Data analysis

The historical growth pattern in scientific productions indicates a minor decline in 2003 after an increasing trend from 2000 to 2002. There was a generally rising trend between 2004 and 2014, with occasional deviations. Fifty-two articles were produced at its peak around 2014. In 2017, there were 26 articles, the lowest number since 2014. There was a rise in 2018 and a trend of fluctuations in the years that followed. From 2000 to 2014, there was a general upward trend in the output of scientific works. However, there was a downturn from 2014 to 2017, interspersed with recovery periods and volatility in the following years.

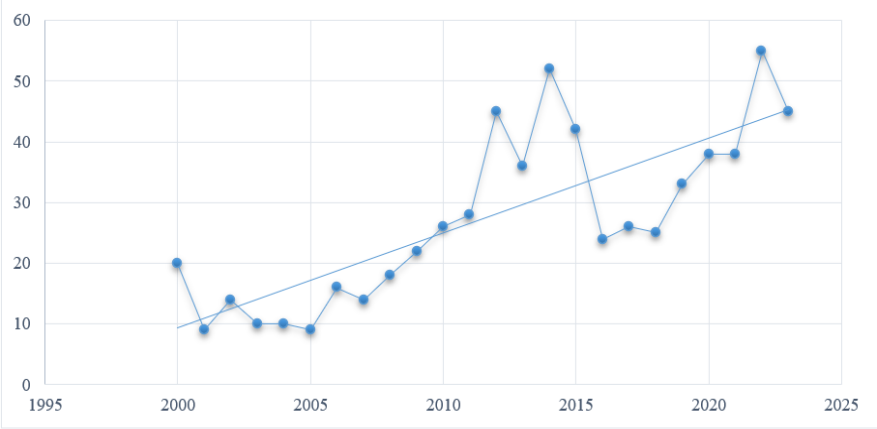

Fig 1. The growth trend of scientific productions

The results of the second section demonstrate that in terms of magazine order, there are 124 papers in Procedia - Social and Behavioral Sciences, 75 in Teaching and Teacher Education, 22 in Computers & Education, 16 in International Journal of Educational Research, and 15 in System.15 publications in the field of educational evaluation; 14 in the field of forest ecology and management; 9 in the field of computers in human behavior; 9 in the field of linguistics and education; Procedia Nine publications in computer science, eight in the international journal of educational development even papers on learning and individual differences, and six articles on the review of children and youth services.

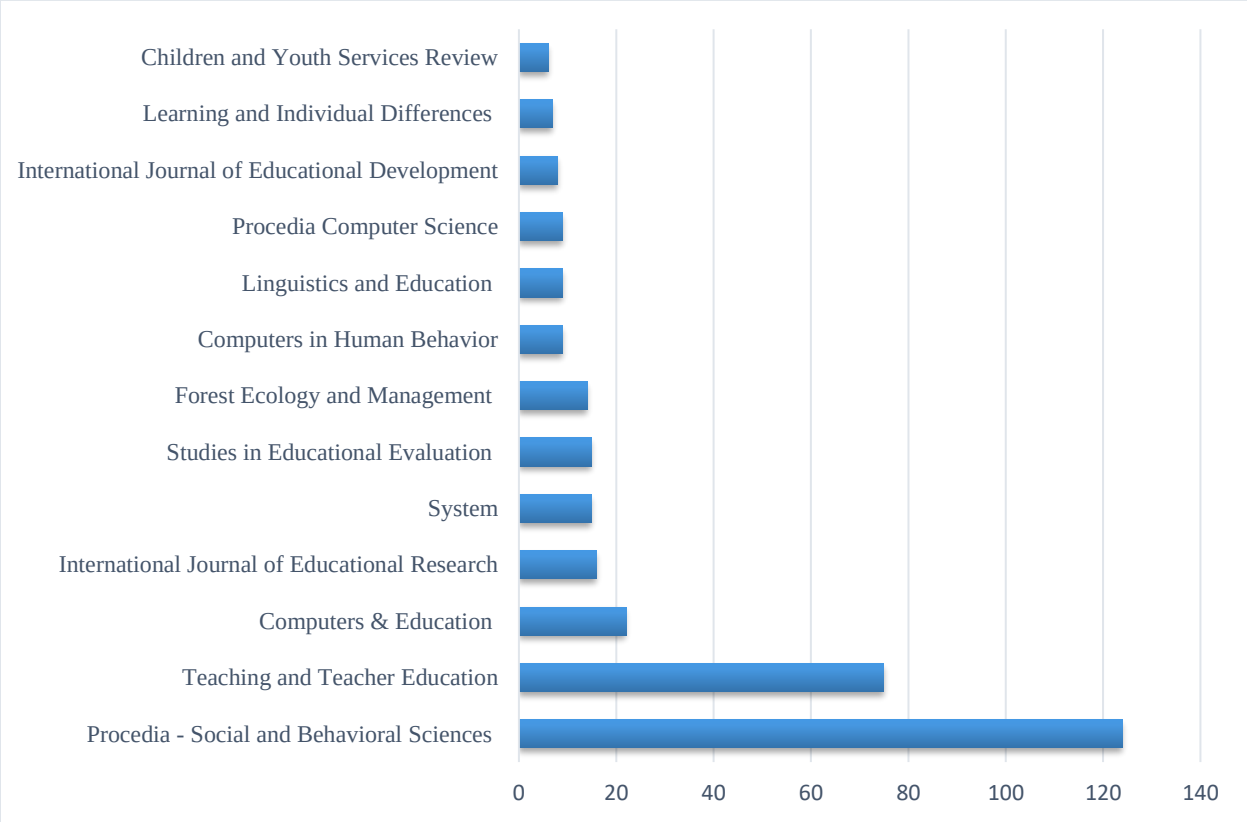

Fig 2. The frequency of articles published in various publications

Table 2 also shows the most important and often used keywords out of all the phrases. The phrases teacher education, higher education, motivation, professional development, self-efficacy, and classroom management teachers were most frequently used.

Table 2. Frequency of the most critical and frequent keywords

Keyword	Co-occurrence	Link
Teacher education	21	6
Higher education	17	11
Self-efficacy	13	12
Classroom management	12	4
Teachers	12	16
Motivation	11	9
Professional development	10	4A
Education	9	1
Improving classroom teaching	9	11
Online learning	9	6
Covid-19	8	5
Teaching/learning strategies	8	13
Forest management	7	0
Interactive learning environments	7	11
Physical education	7	7
Secondary education	7	7
Sustainability	7	1
Teacher training	7	4
Classroom discourse	6	0
E-learning	6	6
Inclusive education	6	2
Management	6	0
Mentoring	6	4
Pedagogical issues	6	11
Physical activity	6	4
Primary education	6	4
Burnout	5	5
China	5	2

The software's analytical results are displayed in three maps: network visualization, density visualization, and excessive visualization.

B) Network visualization

After five iterations of the existing connections between the articles on this topic, 35 nodes were created—each represented as a circle and connected to a particular subject. Conversely, the closer a collection is to other collections, the bigger the circle. Analyzing the forms of the lines joining the circles makes it clear that these lines depict the link between the sets; the thicker the line, the stronger the connection. The research network consists of 7 clusters and 101 links.

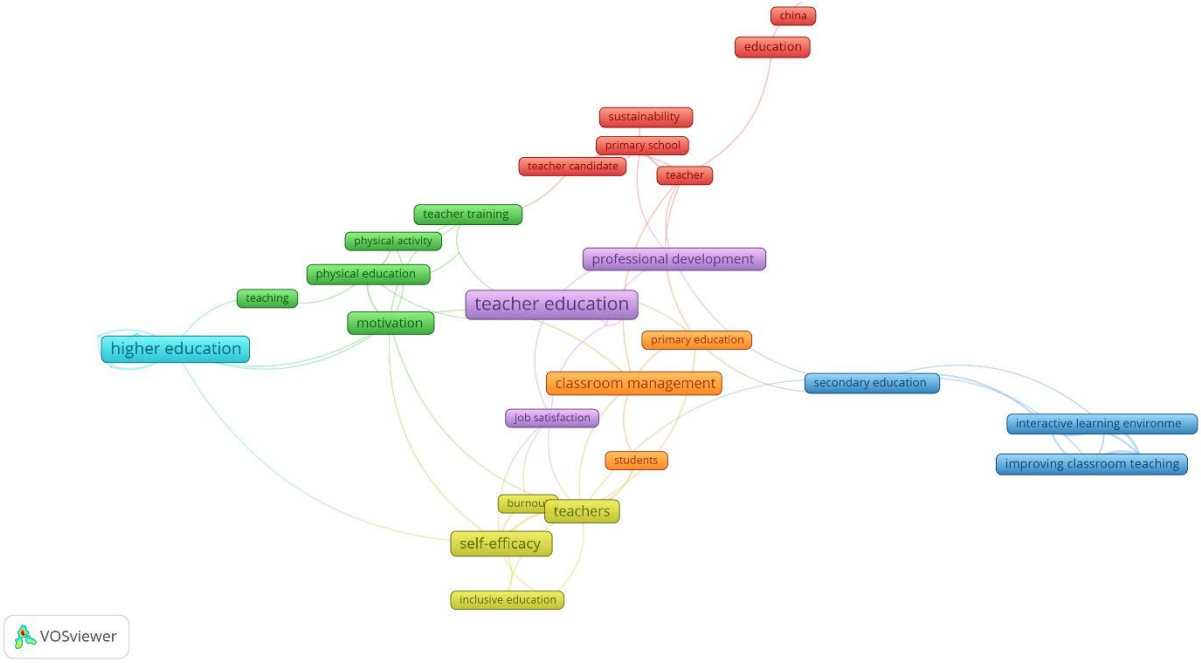

Fig 3: Clusters formed in the field of Classroom Management (network visualization)

The network representation in Fig. 3 illustrates how a distinct color represents each cluster it generated. According to a poll on clusters in the scientific domain, cluster number one is the largest and best cluster, as indicated in the image in red. There are 41 links and seven topic categories in this cluster. The relevant node of the cluster in question is larger than the other nodes since "teacher" is the category with the most linkages (9 links) with other network users. Cluster number two, shown as green in the figure, has 25 relationships and six members, placing it second in link formation. "motivation," out of all the categories, connects the most (49) nodes with others.

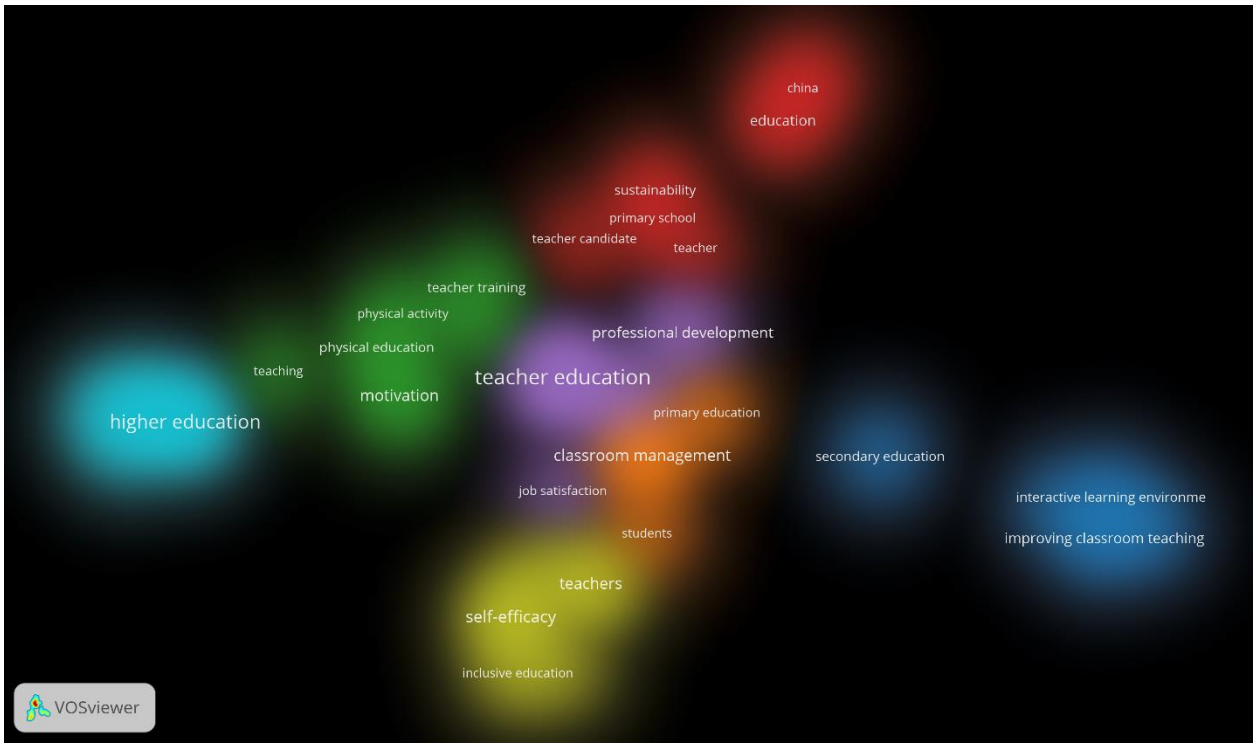

Fig 4. Domains related to clusters in the field of Classroom Management (density visualization)

In other study findings, all eight clusters and their subsets in the form of domains are depicted, with the black backdrop indicating the domains of all five clusters. This figure's color matches the preceding one.

An extremely graphic map displays historical data and a temporal analysis—figure 5. Additionally, places of greater interest in past years are indicated by darker hues, whereas lighter colors characterize newer, newly examined and investigated areas.

Table 3. Areas of interest in previous years in the field of Classroom Management

Word	Average	Examples[1]
Professional developement	2010	**(Lazarides et al., 2020; Prilop et al., 2021; Simonsen et al., 2020)**
Teacher Education	2012	**(McGarr, 2021; Stevenson et al., 2020; Wolff et al., 2021)**
Primary education	2012	**(Handrianto et al., 2021; Lazarides et al., 2020)**
Self-efficiency	2013	**(Hettinger et al., 2021; Lazarides et al., 2020; Slater & Main, 2020)**
Motivation	2015	**(Berger & Girardet, 2021; Kowalski & Froiland, 2020)**

Furthermore, Table 3's study findings indicate that subjects like "professional development," "teacher education," "primary education," "self-efficacy," and "motivation" have garnered much attention in the past.

Table 4. New areas investigated in the field of Classroom Management

Word	Average	Examples
Structural equation modeling	2018	**(Burić & Kim, 2020; Liu et al., 2020; Nasution et al., 2020)**
Sustainability	2020	**(Meesuk et al., 2020; Mora, 2020; Pilotti & Ghazo, 2020)**
Physical activity	2020	**(Guirado et al., 2021; Mok et al., 2020; Setyaningsih & Suchyadi, 2021)**
COVID-19	2022	**(Sanoto & Sanoto, 2021; Sianipar et al., 2021; Stamatis, 2021)**
China	2022	**(Huang et al., 2023; Qingyan et al., 2023; Zhou et al., 2023)**

Table 4 presents the results of the current study and investigation into new topics. In the realm of classroom management, for instance, the subjects of "Structural Equation Modeling," "Sustainability," "Physical Activity," "COVID-19," and "China" are new.

[1] Some examples have been chosin after 2018.

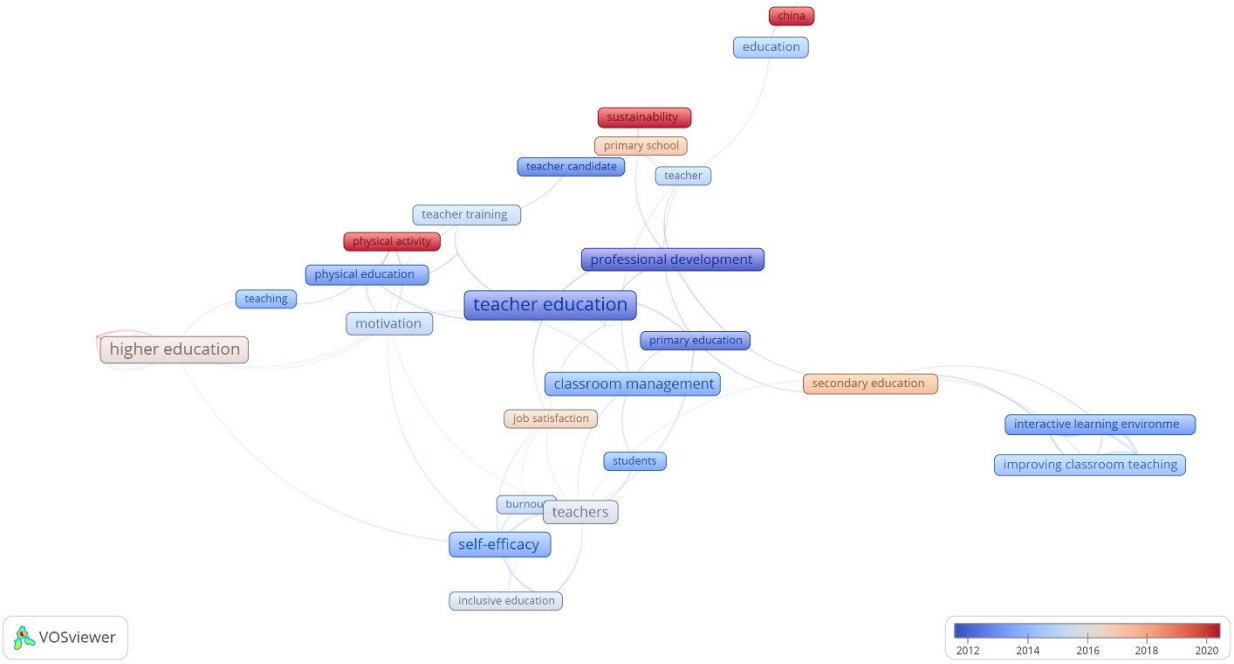

Fig 5. Co-occurrence of words in the field of classroom management (overly visualization)

As the study's results and the co-occurrence density of terms in the field of classroom management are displayed in Figure 6, The areas with a white coloration indicate articles or subjects that have not yet been studied, where there is a research gap where further investigation may be conducted in the future, or where the density was probably low since there were not many articles. The distance between the phrases also shows how they relate; the more profound the region's color, the closer the words are. The red colors indicate the articles and subjects that require revision; they have the highest density and the most essential material in this industry.

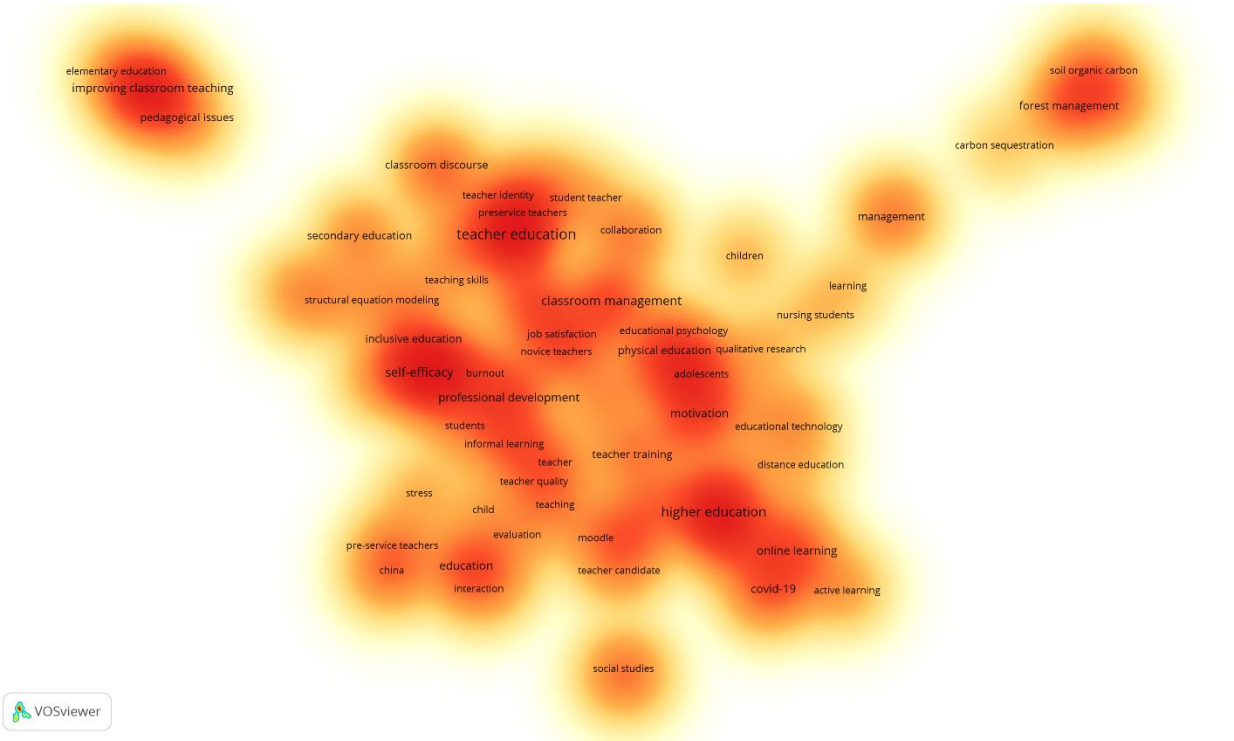

Fig 6. Hot articles in the field of Classroom Management (density visualization)

The map indicates that some of the most essential categories in academic literature are "education," "teacher education," and "higher education." These hotspots are shown on the map as red dots, and the number of publications decreases as researchers leave them and increases as they approach. Additionally, the map shows scattered areas that could correspond to novel and distinct research questions at this time, suggesting a change in emphasis. Among the most important themes are "social science," "management," "classroom discipline," "active learning," and "education technology." Because these areas are tied to the system as a whole, the study's emphasis may need to be changed.

Discussion and conclusion

The historical growth pattern in scientific productions shows a minor decline in 2003, followed by a generally rising trend between 2004 and 2014. The peak of articles was around 2014, with 26 articles produced in 2017, the lowest since 2014. There was a rise in 2018 and a fluctuating trend in the following years. The most important and often used keywords in scientific works include teacher education, higher education, motivation, professional development, self-efficacy, and classroom management teachers. The most significant and best cluster is cluster number one, with 41 links and seven topic categories. The relevant node is larger than the other nodes, with "teacher" being the most linkages with other network users. Cluster number two has 25 relationships and six members, placing it second in link formation.

The study findings indicate that subjects like "professional development," "teacher education," "primary education," "self-efficacy," and "motivation" have garnered much attention in the past. The map indicates that some of the most essential categories in academic literature are "education," "teacher education," and "higher education," with the number of publications decreasing as researchers move away from them. Among the most important themes are "social science," "management," "classroom

discipline," "active learning," and "education technology." The study's emphasis may need to be changed due to the connection between these areas and the system as a whole.

In recent years, several improvements have been suggested in classroom management. These include using technology, providing opportunities for professional development, integrating social and emotional learning, stressing culturally sensitive classroom management, promoting cooperation and communication, putting restorative practices into practice, employing data-driven decision-making, placing a high value on developing relationships between teachers and students, involving students in decision-making processes, offering training on trauma-informed practices, and encouraging ongoing reflection and adaptation.

Technology may improve parent-student communication, expedite administrative work, and offer creative approaches to student engagement. Opportunities for professional development can provide educators access to modern methods and techniques. Social and emotional learning programs can help create an accepting and happy learning environment in the classroom by encouraging empathy, self-control, and constructive interactions. Diverse origins and experiences are taken into account by culturally responsive classroom management techniques, which provide a more welcoming and encouraging learning environment.

Building a feeling of community and shared responsibility requires cooperation and communication between educators, parents, and students. Individual student needs are met via personalized learning strategies, and accountability and responsibility are fostered through restorative practices. Support strategies and targeted interventions can be informed by data-driven decision-making. Encouraging student participation in decision-making procedures cultivates a feeling of accountability and ownership. Teachers who want to understand better and support kids who may have suffered trauma might receive training from trauma-informed practices. The continuing growth and enhancement of classroom management techniques depend on constant reflection and modification.

One of the limitations of this research is the time limit and the Science Direct article database. Also, only English articles were studied, and articles in other languages can provide a variety of analyses.

References

Arshad, M., Qamar, D. Z. A., Ahmad, D. G., & Saeed, D. A. (2018). Influence of Classroom Management Strategies on Students Learning. *International Journal of Educational Sciences*, *3*(1), 37–48. https://doi.org/10.1080/09751122.2011.11890007

Berger, J. L., & Girardet, C. (2021). Vocational teachers' classroom management style: the role of motivation to teach and sense of responsibility. *European Journal of Teacher Education*, *44*(2), 200–216. https://doi.org/10.1080/02619768.2020.1764930

Bozkus, K. (2021). A Systematic Review of Studies on Classroom Management from 1980 to 2019. *International Electronic Journal of Elementary Education*, *13*(4), 433–441. https://doi.org/10.26822/iejee.2021.202

Burić, I., & Kim, L. E. (2020). Teacher self-efficacy, instructional quality, and student motivational beliefs: An analysis using multilevel structural equation modeling. *Learning and Instruction*, *66*, 101302. https://doi.org/10.1016/J.LEARNINSTRUC.2019.101302

Caldera, A., Whitaker, M. C., & Conrad Popova, D. A. D. (2020). Classroom management in urban schools: proposing a course framework. *Teaching Education*, *31*(3), 343–361. https://doi.org/10.1080/10476210.2018.1561663

Chen, P. Z., Chang, T. C., & Wu, C. L. (2020). Effects

of gamified classroom management on the divergent thinking and creative tendency of elementary students. *Thinking Skills and Creativity*, *36*, 100664. https://doi.org/10.1016/J.TSC.2020.100664

Cheung, S. K. S., Kwok, L. F., Phusavat, K., & Yang, H. H. (2021). Shaping the future learning environments with smart elements: challenges and opportunities. *International Journal of Educational Technology in Higher Education*, *18*(1), 1–9. https://doi.org/10.1186/S41239-021-00254-1/METRICS

DEMİR, S. (2021). Effects of learning style based differentiated activities on gifted students' creativity. *Journal for the Education of Gifted Young Scientists*, *9*(1), 47–56. https://doi.org/10.17478/JEGYS.754104

Demirdag, S. (2015). Classroom management and students self-esteem: Creating positive classrooms. *Educational Research and Reviews*, *10*(2), 191–197. https://doi.org/10.5897/ERR2014.2000

Dort, M., Strelow, A. E., French, B., Groom, M., Luman, M., Thorell, L. B., Biele, G., & Christiansen, H. (2020). Bibliometric Review: Classroom Management in ADHD—Is There a Communication Gap Concerning Knowledge Between the Scientific Fields Psychiatry/Psychology and Education? *Sustainability 2020, Vol. 12, Page 6826*, *12*(17), 6826. https://doi.org/10.3390/SU12176826

Fathi, K., Karimi, A., & Meidani, M. (2023). Identifying Trends in School Administration in the New Era (2000-2023). *School Administration*, 11(4), 32-55. doi: 10.22034/jsa.2023.63085

Finkelstein, S., Sharma, U., & Furlonger, B. (2021). The inclusive practices of classroom teachers: a scoping review and thematic analysis. *International Journal of Inclusive Education*, *25*(6), 735–762. https://doi.org/10.1080/13603116.2019.1572232

Goss, H. (2022). Student Learning Outcomes Assessment in Higher Education and in Academic Libraries: A Review of the Literature. *The Journal of Academic Librarianship*, *48*(2), 102485. https://doi.org/10.1016/J.ACALIB.2021.102485

Guirado, T., Chambonnière, C., Chaput, J. P., Metz, L., Thivel, D., & Duclos, M. (2021). Effects of Classroom Active Desks on Children and Adolescents' Physical Activity, Sedentary Behavior, Academic Achievements and Overall Health: A Systematic Review. *International Journal of Environmental Research and Public Health 2021, Vol. 18, Page 2828*, *18*(6), 2828. https://doi.org/10.3390/IJERPH18062828

Hakvoort, I., Lindahl, J., & Lundström, A. (2019). A bibliometric review of approaches to address conflicts in schools: Exploring the intellectual base. *Conflict Resolution Quarterly*, *37*(2), 123–145. https://doi.org/10.1002/CRQ.21266

Hallinger, P., & Kovačević, J. (2019). A Bibliometric Review of Research on Educational Administration: Science Mapping the Literature, 1960 to 2018. *Review of Educational Research*, *89*(3), 335–369. https://doi.org/10.3102/0034654319830380

Handrianto, C., Rasool, S., Arinal Rahman, M., Ilhami, A., Antasari Banjarmasin, U., & Sultan Syarif Kasim, U. (2021). Teachers` Self-Efficacy and Classroom Management in Community Learning Centre (CLC) Sarawak. *SPEKTRUM: Jurnal Pendidikan Luar Sekolah (PLS)*, *9*(2), 154–163. https://doi.org/10.24036/SPEKTRUMPLS.V9I2.111963

Hepburn, L., Beamish, W., & Alston-Knox, C. L. (2021). Classroom management practices commonly used by secondary school teachers: results from a Queensland survey. *Australian Educational Researcher*, *48*(3), 485–505. https://doi.org/10.1007/S13384-020-00402-Y/METRICS

Hettinger, K., Lazarides, R., Rubach, C., & Schiefele, U. (2021). Teacher classroom management self-efficacy: Longitudinal relations to perceived teaching behaviors and student enjoyment. *Teaching and Teacher Education*, *103*, 103349. https://doi.org/10.1016/J.TATE.2021.103349

Huang, W., Li, T., Pan, Y., & Ren, J. (2023). Teacher characteristics and student performance: Evidence from random teacher-student assignments in China. *Journal of Economic Behavior & Organization*, *214*, 747–781. https://doi.org/10.1016/J.JEBO.2023.08.024

Inganah, S., Darmayanti, R., & Rizki, N. (2023). Problems, Solutions, and Expectations: 6C Integration of 21 st Century Education into Learning Mathematics. *JEMS: Jurnal Edukasi Matematika Dan Sains*, *11*(1), 220–238. https://doi.org/10.25273/JEMS.V11I1.14646

Jeong, H. C., & So, W. Y. (2020). Difficulties of Online Physical Education Classes in Middle and High School and an Efficient Operation Plan to Address Them. *International Journal of Environmental Research and Public Health 2020, Vol. 17, Page 7279*, *17*(19), 7279. https://doi.org/10.3390/IJERPH17197279

Jobirovna, A. J. (2023). Effective Classroom Management: Strategies for Teachers. *American Journal of Language, Literacy and Learning in STEM Education (2993-2769)*, *1*(10), 444–450. https://grnjournal.us/index.php/STEM/article/view/2133

Jumiaty, A. A., & Kuswoyo, H. (2023). UNDERGRADUATE STUDENTS' PERCEPTIONS TOWARDS LECTURER'S CLASSROOM MANAGEMENT IN THE INDONESIAN TERTIARY CONTEXT. *Linguistics and Literature Journal*, *4*(1), 89–99. https://doi.org/10.33365/LLJ.V4I1.3252

Kaushik, N., & Dangwal, R. C. (2023). A Bibliometric Analysis on Entrepreneurial Orientation and Performance Literature Using VOSviewer Software. *Vision: The Journal of Business Perspective*, *0*(0). https://doi.org/10.1177/09722629231169100

Khaldi, H., & Prado-Gascó, V. (2021). Bibliometric maps and co-word analysis of the literature on international cooperation on migration. *Quality and Quantity*, *55*(5), 1845–1869. https://doi.org/10.1007/S11135-020-01085-4/METRICS

Kilag, O. K., Kilag, O. K. T., Miñoza, J. R., Comighud, E. S., Amontos, C. A., Damos, M. C., & Abendan, C. F. K. (2023). Empowering Teachers: Integrating Technology into Livelihood Education for a Digital Future. *Excellencia: International Multidisciplinary Journal of Education (2994-9521)*, *1*(1), 30–41. https://multijournals.org/index.php/excellencia-imje/article/view/3

Kincade, L., Cook, C., & Goerdt, A. (2020). Meta-Analysis and Common Practice Elements of Universal Approaches to Improving Student-Teacher Relationships. *Review of Educational Research*, *90*(5), 710–748. https://doi.org/10.3102/0034654320946836

Kowalski, M. J., & Froiland, J. M. (2020). Parent perceptions of elementary classroom management systems and their children's motivational and emotional responses. *Social Psychology of Education*, *23*(2), 433–448. https://doi.org/10.1007/S11218-020-09543-5/METRICS

Lazarides, R., Watt, H. M. G., & Richardson, P. W. (2020). Teachers' classroom management self-efficacy, perceived classroom management and teaching contexts from beginning until mid-career. *Learning and Instruction*, *69*, 101346. https://doi.org/10.1016/J.LEARNINSTRUC.2020.101346

Li, B., Xu, Z., Hong, N., & Hussain, A. (2022). A Bibliometric Study and Science Mapping Research of Intelligent Decision. *Cognitive Computation*, *14*(3), 989–1008. https://doi.org/10.1007/S12559-022-09993-3/METRICS

Liang, F., & Cao, L. (2021). Linking employee resilience with organizational resilience: The roles of coping mechanism and managerial resilience. *Psychology Research and Behavior Management*, *14*, 1063–1075. https://doi.org/10.2147/PRBM.S318632

Liu, J., Yi, Y., & Wang, X. (2020). Exploring factors influencing construction waste reduction: A structural equation modeling approach. *Journal of Cleaner Production*, *276*, 123185. https://doi.org/10.1016/J.JCLEPRO.2020.123185

Martin, L. D. (2021). Reconceptualizing Classroom

Management in the Ensemble: Considering Culture, Communication, and Community. *Music Educators Journal*, *107*(4), 21–27. https://doi.org/10.1177/00274321211015180

McAllister, J. T., Lennertz, L., & Atencio Mojica, Z. (2022). Mapping A Discipline: A Guide to Using VOSviewer for Bibliometric and Visual Analysis. *Science & Technology Libraries*, *41*(3), 319–348. https://doi.org/10.1080/0194262X.2021.1991547

McGarr, O. (2021). The use of virtual simulations in teacher education to develop pre-service teachers' behaviour and classroom management skills: implications for reflective practice. *Journal of Education for Teaching*, *47*(2), 274–286. https://doi.org/10.1080/02607476.2020.1733398

Meesuk, P., Sramoon, B., & Wongrugsa, A. (2020). Classroom Action Research-based Instruction: The Sustainable Teacher Professional Development Strategy. *Journal of Teacher Education for Sustainability*, *22*(1), 98–110. https://doi.org/10.2478/JTES-2020-0008

Mok, M. M. C., Chin, M. K., Korcz, A., Popeska, B., Edginton, C. R., Uzunoz, F. S., Podnar, H., Coetzee, D., Georgescu, L., Emeljanovas, A., Pasic, M., Balasekaran, G., Anderson, E., & Durstine, J. L. (2020). Brain Breaks® Physical Activity Solutions in the Classroom and on Attitudes toward Physical Activity: A Randomized Controlled Trial among Primary Students from Eight Countries. *International Journal of Environmental Research and Public Health 2020, Vol. 17, Page 1666*, *17*(5), 1666. https://doi.org/10.3390/IJERPH17051666

Mora, A. B. (2020). Gamification for Classroom Management: An Implementation Using ClassDojo. *Sustainability 2020, Vol. 12, Page 9371*, *12*(22), 9371. https://doi.org/10.3390/SU12229371

Nasution, M. I., Fahmi, M., Jufrizen, Muslih, & Prayogi, M. A. (2020). The Quality of Small and Medium Enterprises Performance Using the Structural Equation Model-Part Least Square (SEM-PLS). *Journal of Physics: Conference Series*, *1477*(5), 052052. https://doi.org/10.1088/1742-6596/1477/5/052052

Oyewola, D. O., & Dada, E. G. (2022). Exploring machine learning: a scientometrics approach using bibliometrix and VOSviewer. *SN Applied Sciences*, *4*(5), 1–18. https://doi.org/10.1007/S42452-022-05027-7/TABLES/10

Page, A., Charteris, J., Anderson, J., & Boyle, C. (2021). Fostering school connectedness online for students with diverse learning needs: inclusive education in Australia during the COVID-19 pandemic. *European Journal of Special Needs Education*, *36*(1), 142–156. https://doi.org/10.1080/08856257.2021.1872842

Pilotti, M. A. E., & Ghazo, R. Al. (2020). Sustainable Education Starts in the Classroom. *Sustainability 2020, Vol. 12, Page 9573*, *12*(22), 9573. https://doi.org/10.3390/SU12229573

Prilop, C. N., Weber, K. E., & Kleinknecht, M. (2021). The role of expert feedback in the development of pre-service teachers' professional vision of classroom management in an online blended learning environment. *Teaching and Teacher Education*, *99*, 103276. https://doi.org/10.1016/J.TATE.2020.103276

Qingyan, G., Azar, A. S., & Albattat, A. R. S. (2023). Factors Affecting Students Performance Mediated by Teachers Quality in Higher Vocational Colleges in Maoming City, China. *International Journal of Professional Business Review: Int. J. Prof.Bus. Rev., ISSN 2525-3654, ISSN-e 2525-3654, Vol. 8, Nº. 8, 2023 (Ejemplar Dedicado a: Continuous Publication; E02907)*, *8*(8), 39. https://doi.org/10.26668/businessreview/2023.v8i8.2993

Rahmati, R., Karimi, A., & Meidani, M. (2024). Iranian Distance Education (IDEJ): Context analysis. *Quarterly of Iranian Distance Education Journal*, 6(1), 54-67. doi: 10.30473/idej.2024.69315.1175

Rahmati, R., & Karimi, A. (2022). scientometric Mapping of Educational technology (1999-2022). *Quarterly of Iranian Distance Education Journal*, *4*(1), 98-110. doi: 10.30473/idej.2022.65389.1121

Rubtsova, A. V., Almazova, N. I., Bylieva, D. S., & Krylova, E. A. (2020). Constructive model of multilingual education management in higher school. *IOP Conference Series: Materials Science and Engineering*, *940*(1), 012132. https://doi.org/10.1088/1757-899X/940/1/012132

Ryazanova, O., & Jaskiene, J. (2022). Managing individual research productivity in academic organizations: A review of the evidence and a path forward. *Research Policy*, *51*(2), 104448. https://doi.org/10.1016/J.RESPOL.2021.104448

Sanoto, H., & Sanoto, H. (2021). Online Learning Management in The Covid-19 Pandemic Era. *Journal of Education, Teaching and Learning*, *6*(1), 47–52.

Sanusi, I. T., Oyelere, S. S., & Omidiora, J. O. (2022). Exploring teachers' preconceptions of teaching machine learning in high school: A preliminary insight from Africa. *Computers and Education Open*, *3*, 100072. https://doi.org/10.1016/J.CAEO.2021.100072

Setyaningsih, S., & Suchyadi, Y. (2021). CLASSROOM MANAGEMENT IN IMPROVING SCHOOL LEARNING PROCESSES IN THE CLUSTER 2 TEACHER WORKING GROUP IN NORTH BOGOR CITY. *JHSS (JOURNAL OF HUMANITIES AND SOCIAL STUDIES)*, *5*(1), 99–104. https://doi.org/10.33751/JHSS.V5I1.3906

Sianipar, D., Waldes Hasugian, J., Sairwona, W., Kristian Zega, Y., & Ritonga, N. (2021). Classroom Management of Christian Religious Education During the Covid-19 Pandemic. *Budapest International Research and Critics Institute (BIRCI-Journal)*. https://doi.org/10.33258/BIRCI.V4I4.2674

Simonsen, B., Freeman, J., Myers, D., Dooley, K., Maddock, E., Kern, L., & Byun, S. (2020). The Effects of Targeted Professional Development on Teachers' Use of Empirically Supported Classroom Management Practices. *Journal of Positive Behavior Interventions*, *22*(1), 3–14. https://doi.org/10.1177/1098300719859615/ASSET/IMAGES/LARGE/10.1177_1098300719859615-FIG1.JPEG

Slater, E. V., & Main, S. (2020). A measure of classroom management: validation of a pre-service teacher self-efficacy scale. *Journal of Education for Teaching*, *46*(5), 616–630. https://doi.org/10.1080/02607476.2020.1770579

Song, Y., Chen, X., Hao, T., Liu, Z., & Lan, Z. (2019). Exploring two decades of research on classroom dialogue by using bibliometric analysis. *Computers & Education*, *137*, 12–31. https://doi.org/10.1016/J.COMPEDU.2019.04.002

Stamatis, P. J. (2021). Impact of COVID-19 on Teaching and Classroom Management: Thoughts Based on Current Situation and the Role of Communication. *European Journal of Education and Pedagogy*, *2*(1), 57–63. https://doi.org/10.24018/EJEDU.2021.2.1.48

Stevenson, N. A., VanLone, J., & Barber, B. R. (2020). A Commentary on the Misalignment of Teacher Education and the Need for Classroom Behavior Management Skills. *Education and Treatment of Children*, *43*(4), 393–404. https://doi.org/10.1007/S43494-020-00031-1/METRICS

Tomaszewski, R. (2023). Visibility, impact, and applications of bibliometric software tools through citation analysis. *Scientometrics*, *128*(7), 4007–4028. https://doi.org/10.1007/S11192-023-04725-2/TABLES/5

van Eck, N. J., & Waltman, L. (2009). Software survey: VOSviewer, a computer program for bibliometric mapping. *Scientometrics*, *84*(2), 523–538. https://doi.org/10.1007/S11192-009-0146-3

White, K. M. (2020). Building strong teacher–child relationships in today's kindergarten classroom: Focusing on opportunities versus obstacles. *Journal of Early Childhood Research*, *18*(3),

275–286. https://doi.org/10.1177/1476718X20938092

Wilkins, N. J., Verlenden, J. M. V., Szucs, L. E., & Johns, M. M. (2023). Classroom Management and Facilitation Approaches That Promote School Connectedness. *Journal of School Health*, *93*(7), 582–593. https://doi.org/10.1111/JOSH.13279

Wolff, C. E., Jarodzka, H., & Boshuizen, H. P. A. (2021). Classroom Management Scripts: a Theoretical Model Contrasting Expert and Novice Teachers' Knowledge and Awareness of Classroom Events. *Educational Psychology Review*, *33*(1), 131–148. https://doi.org/10.1007/S10648-020-09542-0/FIGURES/3

Zhou, J., Bao, J., & He, R. (2023). Characteristics of Good Mathematics Teaching in China: Findings from Classroom Observations. *International Journal of Science and Mathematics Education*, *21*(4), 1177–1196. https://doi.org/10.1007/S10763-022-10291-5/METRICS

Name: Amir Karimi
Email: amirkarimizanjani1379@gmail.com
research lecturer of history education, Farhangian University, Alborz campus, P.O. Box 14665-889, Tehran, Iran.

Name: Kourosh Fathi
Email: k.fathi@cfu.ac.ir
Department of History, Farhangian University faculty member (Assistant Professor)

Name: Saeedeh Raghimi
Email: saeedehraghimi@gmail.com
Educational Sciences department, Payam Noor University, Tehran