Pegem Journal of Education and Instruction, Vol. 13, No. 3 , 2023 (pp. 84-93)

RESEARCH ARTICLE WWW.PEGEGOG.NET

Curriculum and Physical Education: Bibliometric Analysis using the Scopus Database

Novri Gazali[1]*, Sabaruddin Yunis Bangun[2], Alficandra[1], Feby Elra Perdima[3], M Fransazeli Makorohim[1], Ahmad Rahmadani[1], Khairul Hafezad Abdullah[4]

[1]Department of Physical Education Health and Recreation, Universitas Islam Riau, Indonesia

[2]Department of Physical Education Health and Recreation, Universitas Negeri Medan, Indonesia

[3]Department of Physical Education, Universitas Dehasen, Indonesia

[4]Science Laboratory Unit, Department of Academic Affairs, Universiti Teknologi MARA, Malaysia

Abstract

The curriculum has been provided by an educational institution as a lesson plan in one period of education level. In physical education, the curriculum focuses on developing the skills and concepts of movement that students need. The main objective of this study was to conduct a bibliometric analysis of articles published in Scopus on curriculum and physical education. The results showed that the study of curriculum and physical education totaled 420 articles which began to be published in the Scopus database from 1931-2021. Then, the researcher carried out a filter that was only limited to journal articles and proceedings. So that the number of documents found was 359 publications, consisting of 349 articles from journals and 10 articles from the proceedings obtained. Based on publications in the Scopus database, the findings reveal that: the number of publications has increased, although there is an up and down trend from year to year; most of the publications are written by researchers located in several countries and universities; The United States of America is the country that contributes the most writers; Monash University from Australia is the most productive institution; and Matthew D Curtner-Smith is the author's most published and most influential cited articles; an influential topic, namely the hidden curriculum. This analysis can provide insight into the development of research in the field of curriculum and physical education, and it can be a source of information for teachers, lecturers, schools, universities, and the world of education.

Keywords: Curriculum, physical education, bibliometric;

Introduction

Curriculum implementation is one of the most important problems in the curriculum cycle (Alshammari, 2013; Aytan, 2016; Suyanto, 2018). The curriculum is very important, because it is needed in formulating the main objectives of the learning process in every country (Mustafa, 2020). Each education unit will adjust the characteristics of the curriculum in accordance with institutional standards and policies with consideration of the suitability of human resource capabilities, facilities, social conditions, and existing financing (Sholichin, Saifudin, & Buana, 2019). Physical education is the main area of learning in a curriculum (Gazali & Cendra, 2020), that focuses on developing the skills and movement concepts students need to participate in physical activities with competence and confidence (Lynch, 2019). There have been many researchers from various countries who have studied the curriculum in physical education learning (Alfrey & O'Connor, 2020; Santos, Neves, Pereira, & Cardoso 2020; Zhang, Wang, Yli-Piipari, & Chen, 2020).

This curriculum research tends to discuss change and reform (Lee & Cho, 2014; Rus, Talaghir, Iconomescu, 2019; Scanlon, Calderón, & MacPhail, 2021), curriculum policies and principles (Jin, 2013; Lambert & Penney, 2020), assessment analysis (Otero-Saborido, Vázquez-Ramos, Cenizo-Benjumea, & González-Jurado, 2020), digital media and technology (Araújo, Knijnik & Ovens, 2020), investigation of knowledge, skills, and understanding (O'Connor & Penney, 2021; Stevens & Culpan, 2021), curriculum and physical health (Yang & Liu, 2021), curriculum ideology (Valencia-Peris, Salinas-Camacho, & Martos-García, 2020), instructional approach to subject matter (Bai, 2018; Cliff, 2012; Gómez-Gonzalvo, Molina & Devis-Devis, 2018), curriculum development (Kennedy & Yun, 2019; You, 2011).

The development of research on the physical education curriculum from the past until now is getting better. This is due to the importance of the curriculum in the world of education. Almost all countries nowadays make frequent curriculum changes (Gray, Mulholland, & Maclean, 2012;

Corresponding Author e-mail: novri.gazali@edu.uir.ac.id

https://orcid.org/ 0000-0002-7968-1544

How to cite this article: Gazali N, Bangun SY, Alficandra, Perdima FE (2023). Curriculum and Physical Education: Bibliometric Analysis a using the Scopus Database. Pegem Journal of Education and Instruction, Vol. 13, No. 3, 2023, 84-93

Source of support: Nil

Conflict of interest: None

DOI: 10.47750/pegegog.13.03.10

Received: 07.04.2022

Accepted: 31.10.2022 **Publication:** 01.07.2023

Jess et al., 2011; Jin, 2013)a Curriculum for Excellence, physical education (PE. These changes are generally driven by shifting social needs or government obligations (Mulyasa, 2018; Penney & Jess, 2004). Curriculum change is one of the triggers for problems in schools, especially in physical education subjects so that students, teachers, and lecturers are actively involved in conducting research to solve problems that occur (Hanief, Kardiyanto, Winarno, & Haqiyah, 2021). Dewi (2021) also conveyed in her research findings, that curriculum reform has not provided substantial results in the aspect of improving learning outcomes.

Research productivity that discusses curriculum and physical education has previously been mapped using the bibliometric method (Gazali et al., 2021). However, this paper only discusses one of the existing curricula in Indonesia, namely Curriculum 2013, and to our knowledge no one has used bibliometric analysis on curriculum and physical education topics using the Scopus database. In doing so, we fill in the gaps and open up perspectives for future studies. By providing an objective and current overview of the curriculum and physical education literature based on bibliometric analysis and visualization, the researcher meet the needs of researchers, teacher educators, and practitioners to be well informed and documented and even to develop ideas for their future research. This study is very important because bibliometrics provides a summary of a very large scientific literature and is very important for proper decision making among experts on a particular issue.

Therefore, this study aims to examine the development of scientific publications and map research into physical education curricula. The research process focused on the following study questions: (1) How has the productivity of curriculum and physical education publications developed using the Scopus database? (2) What are the most influential journals, authors, and articles in the curriculum and physical education fields? and (3) What keywords do often appear in the curriculum and physical education fields in the Scopus database?

Method

In accordance with the objectives of this study, a systematic search was carried out in the Scopus database, which includes high-quality scientific research in more than 250 disciplines, social sciences, and humanities (Cretu & Morandau, 2020). To obtain article metadata, the researcher conducted a phrase search on the Scopus database on April 29, 2021, including the search for the title "curriculum" AND "physical education". There are 420 publications indexed by Scopus. Then, the researcher carried out a filter that was only limited to journal articles and proceedings. So that the number of documents found was 359 publications, consisting of 349 articles from journals and 10 articles from the proceedings obtained. The publication years used were from 1931-2021.

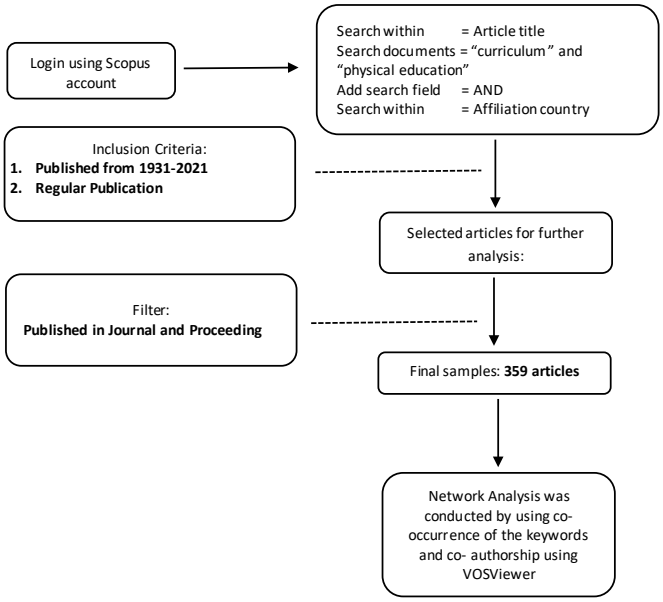

Fig 1: Article metadata search design from Scopus

The researcher mapped the main contributors (author, university, and source name), applied keyword occurrence analysis to determine publication trends, and tracked major themes or topics that appeared in the publication. To present data, researchers used data visualization with the help of the VOSViewer application (Ding, Rousseau & Ronald, 2014). Researchers use several parameters in VOSViewer to obtain article metadata, including: 1) Type of analysis (Co-occurrence analysis), 2) Unit of analysis (All keywords), 3) Method of calculation (Full counting), and 4) Minimum number of author documents (2 documents) (Abdullah et al., 2022; Hanief et al., 2021; Jeong & Koo, 2016).

Findings

This section contains the results of the bibliometric analysis in accordance with the research question. First, the researcher present a survey of the literature that focuses on its evolution over time, and contribution in the field by country, organization, type of document. Second, the researcher examined the most influential journals, leading authors, and papers cited on scientific papers. Third, the researcher looked at the analysis of collaboration patterns between authors and countries using co-authorhip analysis, on existing connections/relationships between authors or journals using co-citation analysis, and between terms or keywords using co-word analysis.

1. How does the productivity of curriculum and physical education publications develop using the Scopus database?

The first article with the title and keywords "curriculum" AND "physical education". published in 1931. Since then,

the field has not been of much interest to researchers. The development of publications in the field of curriculum and physical education began to increase starting in 2011. There was a significant increase where the number of publications recorded in the Scopus database in 2010 was only 9 articles, increasing in 2011 to 24 articles. Since 2011-2021, the number of publications in the Scopus database has fluctuated, where in 2012 the number of publications fell (16 articles), in 2013 it increased by 23, in 2014-2016 it has decreased again and consistently has 19 articles. In 2017-2018 there was another very significant increase of 35 articles. 2019 fell again (19 articles) and in 2020 there was another increase of 36 articles. Meanwhile, in 2021 there are still 11 articles. It is possible that there will be additional additions, because it has only been running for four months, namely April. The dynamics of changes in publication productivity can be seen in Figure 2.

From the published data obtained, the problems studied in the field of curriculum and physical education are focused on several areas determined by the Scopus database. The most dominant field of study in Social Sciences with 250 publications. Monash University is the most productive institution with 9 publications, while the most published author in this field is Matthew D Curtner-Smith. European Physical Education Review is the first choice among other publication media to publish research results with 27 articles. The ten main subject areas, affiliation, title source, and author can be seen in table 1.

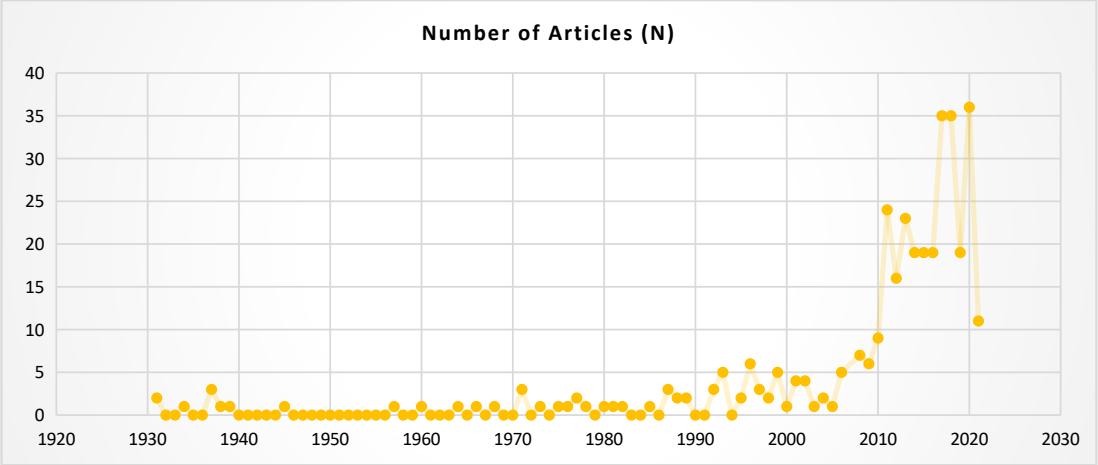

Fig 2: Scientific publication productivity entitled "curriculum" and "physical education" from year to year (source: research data taken from Scopus database)

Table 1: Publication profile for curriculum and physical education fields

Category	*Ten Leading Publications*
Subject Area	Social Sciences (250); Health Professions (167); Medicine (160); Engineering (18); Agricultural and Biological Sciences (14); Psychology (12); Arts and Humanities (11); Chemistry (8); Computer Science (8); Environmental Science (6)
Affiliation	Monash University, Melbourne, Australia (9); University of Edinburgh, Edinburgh, United Kingdom (9); University of Valencia, Valencia, Spain (8); UNESP-Universidade Estadual Paulista, Sao Paulo, Brazil (8); The University of Queensland, Brisbane, Australia (7); University of Illinois Urbana-Champaign, Urbana, United States (6); Chinese University of Hong Kong, Shatin, Hong Kong (6); University of Canterbury, School of Health Sciences, Christchurch, New Zealand (6); University of Alabama, Department of Kinesiology, Tuscaloosa, United States (6); Loughborough University, Loughborough, United Kingdom (5)
Source Title	European Physical Education Review (27); Sport Education and Society (25); Movimento (17); Quest (14); Teoriya I Praktika Fizicheskoy Kultury (12); Curriculum Studies in Health and Physical Education (10); Journal of Teaching in Physical Education (9); Physical Education and Sport Pedagogy (9); Agro Food Industry Hi Tech (8); Research Quarterly for Exercise and Sport (8)
Author	Matthew D Curtner-Smith - University of Alabama, Department of Kinesiology, Tuscaloosa, United States (8); Ang Chen - University of North Carolina at Greensboro, Department of Kinesiology, Greensboro, United States (6); Catherine D. Ennis - University of North Carolina at Greensboro, Department of Kinesiology, Greensboro, United States (6); Dawn Penney - Monash University, Melbourne, Australia and Edith Cowan University, Perth, Australia (5); Laura Alfrey - Monash University, Melbourne, Australia (4); David Kirk - University of Strathclyde, School of Education, Glasgow, United Kingdom and University of Queensland, School of Human Movement and Nutrition Sciences, Brisbane, Australia (4); Trent D. Brown - Australian Council for Health, Physical Education and Recreation (ACHPER) Victorian Branch, Richmond, Australia (3); Cheryl J. Craig - Texas A&M University, College Station, United States (3); Ian Culpan - University of Canterbury, School of Health Sciences, Christchurch, New Zealand (3); Suraya Cristina Darido - UNESP-Universidade Estadual Paulista, Sao Paulo, Brazil (3)

2. What are the most influential journals, writers, and articles in the field of curriculum and physical education?

The research articles were published in 359 source titles (journals and proceedings). The articles published in various journals and proceedings have different effects, the effect can be seen from the large number and citations of journals, authors, and article titles. The following describes the respective influences of journals, authors, and article titles in the field of curriculum and physical education.

Table 2 and Figure 2 present the top 10 journals in terms of the number of articles published in the curriculum and physical education fields. Of the 10 identified, 6 journals had a total of more than 10 articles. European Physical Education Review was in the first place with 27 articles (7.52%), Sport, Education, and Society was in the second place with 25 articles (6.96%), Movimento was in the third place with 17 articles (4.74%)), Quest was in the fourth place with 14 articles (3.90%), Fizicheskoy Kultury's theory of practice I was in the fifth place with 12 articles (3.34%), then Curriculum Studies in Health and Physical Education was ranked sixth with the number of articles 10 (2.79%).

Table 2: Top 10 journals including "curriculum" and "physical education" documents indexed in Scopus

Journal	*Papers*	*%*
European Physical Education Review	27	7,52
Sport, Education and Society	25	6,96
Movimento	17	4,74
Quest	14	3,90
Teoriya I Praktika Fizicheskoy Kultury	12	3,34
Curriculum Studies in Health and Physical Education	10	2,79
Journal of Teaching in Physical Education	9	2,51
Physical Education and Sport Pedagogy	9	2,51
Agro Food Industry Hi-Tech	8	2,23
Research Quarterly for Exercise and Sport	8	2,23

Figure 3 presents the top 10 journals in terms of the number of journals cited in the curriculum and physical education fields. Of the 10 identified, 3 journals had a sizable influence, between 429 - 636 citations. Sport, Education, and Society is in the first place with a number of citations of 636, European Physical Education Review is in the second place with a number of citations of 538, Furthermore, Quest is in the third place with a number of citations of 429.

Next, the researcher use the number of publications and the number of citations as a way of identifying the most active and influential researchers in the curriculum and physical education fields. Citations are used as a measure of influence (Zupic & Cater, 2015). Of the 359 article titles published in the Scopus database, 769 authors contributed to this field. Of the 769 authors, Matthew D Curtner-Smith (University of Alabama, Department of Kinesiology, Tuscaloosa, United States) is the most influential author and has 277 citations of articles cited and has 8 articles. More clearly can be seen in Table 4 and Figure 5.

Given the large number of articles published in the Scopus database and cited by other authors, the researcher are interested in finding out which articles have had the most influence on the curriculum and physical education fields. Of the 359 article titles published in the Scopus database, the article entitled "The more things change the more they stay the same: Factors influencing teachers' interpretations and delivery of national curriculum physical education" written by Matthew D Curtner-Smith in 1999 is most cited article

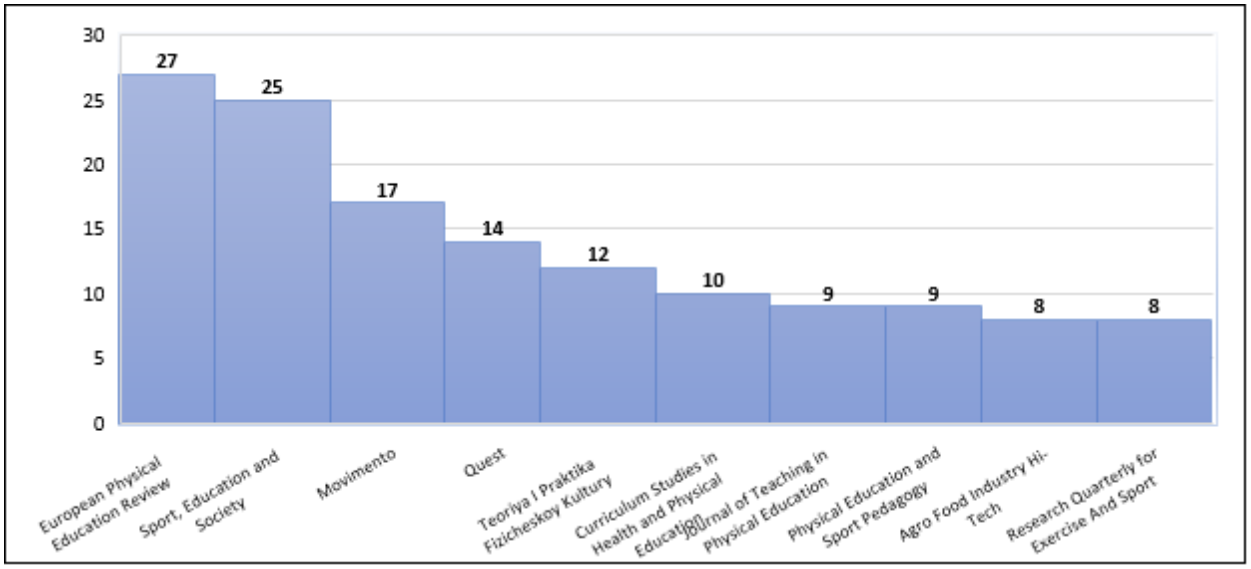

Fig 3: Top 10 journals including "curriculum" and "physical education" documents indexed in scopus

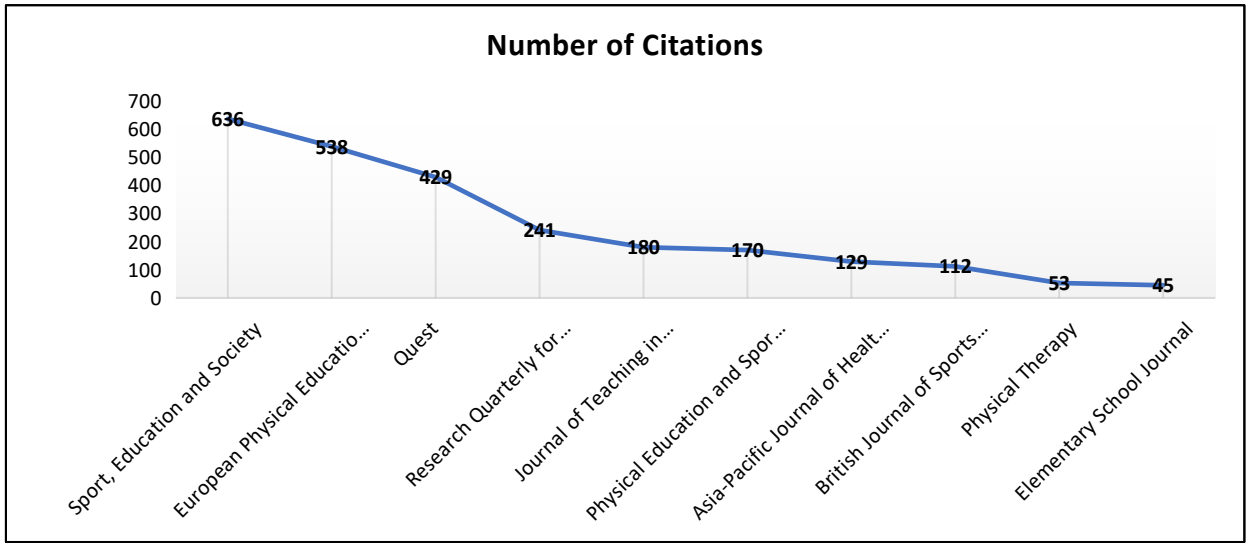

Figure 4: Top 10 journals cited in curriculum and physical education field

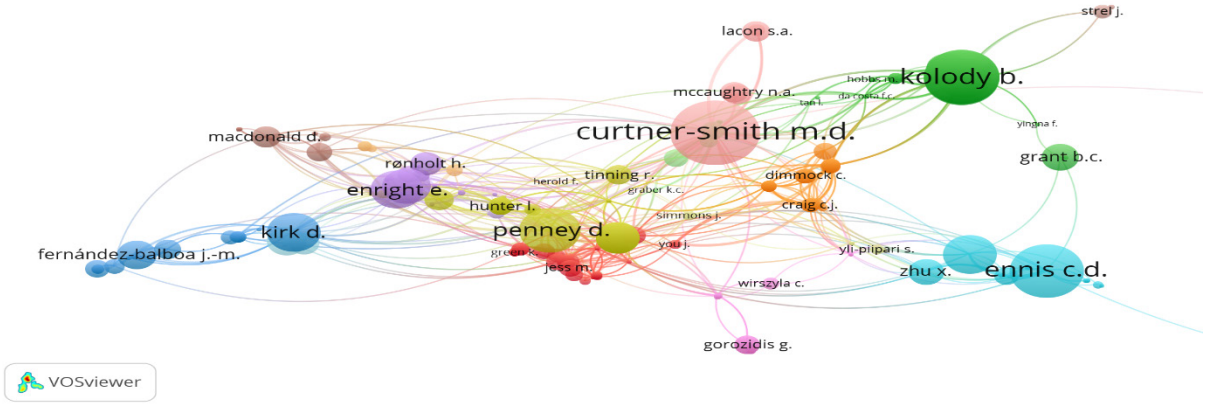

Fig 5: Most cited authors in the field of curriculum and physical education in the Scopus database

Table 3: Most cited authors in the field of curriculum and physical education in the Scopus database

Authors	*Country*	*Documents*	*Citations*
Curtner-Smith M. D	United States	8	277
Kolody B	United States	2	211
Mckenzie T. L	United States	2	211
Sallis J. F	Australia	2	211
Ennis C. D	United States	6	207
Penney D	Australia	5	154
Faucette F. N	United States	1	129
Kirk D	Australia	4	125
Chen A	United States	7	124

with 165 citation counts. The title of this article has also been quoted by several researchers as linked by line. More clearly can be seen in table 4 and figure 6.

3. What keywords do frequently appear in the curriculum and physical education sector in the Scopus database?

This analysis helps us to see the main topics of interest to researchers, to build a conceptual map. In addition, it can highlight key trends in research in the curriculum and physical education fields. Coexistence of keywords and terms means identifying keywords and terms that are found together on the same paper. This analysis shows the relationship between keywords and terms that appear together in the network map (Zupic & Čater, 2015; Van Eck & Waltman, 2014). The researcher started the analysis focusing on the author's keywords, and using the VOSviewer software. Of the 359 article titles published in the Scopus database, 738 keywords were identified. Only keywords with at least 3 occurrences are entered, that translates to 52 keywords. Ten clusters were created, and each cluster contained related keywords that appeared in the same color

Table 4: Most cited articles in the scopus databa se on curriculum and physical education

Title	*Authors*	*Journal*	*Citations*	*Years*
The more things change the more they stay the same: Factors influencing teachers' interpretations and delivery of national curriculum physical education	Curtner-Smith M.D.	Sport, Education and Society	165	1999
Long-term effects of a physical education curriculum and staff development program: SPARK	McKenzie, T. L., Sallis, J. F., Kolody, B., & Faucette, F. N	Research Quarterly for Exercise and Sport	129	1997
Can I do it in my pyjamas? 'Negotiating a physical education curriculum with teenage girls	Enright, E., & O'Sullivan, M	European Physical Education Review	110	2010
Physical education, discourse, and ideology: Bringing the hidden curriculum into view	Kirk D.	Quest	95	1992
Playing a political game and playing for position: Policy and curriculum development in health and physical education	Penney D.	European Physical Education Review	90	2009
Daily physical education in the school curriculum in prepubertal girls during 1 year is followed by an increase in bone mineral accrual and bone width—data from the prospective controlled Malmö pediatric osteoporosis prevention study.	Valdimarsson, Ö., Linden, C., Johnell, O., Gardsell, P., & Karlsson, M. K	Calcified Tissue International	82	2006
Effects of a curriculum and inservice program on the quantity and quality of elementary physical education classes	McKenzie, T. L., Sallis, J. F., Faucette, N., Roby, J. J., & Kolody, B	Research Quarterly for Exercise and Sport	82	1993
Sociocultural characteristics of the hidden curriculum in physical education	Fernández-Balboa J.-M.	Quest	79	1993
Integrating sport into the physical education curriculum in New Zealand secondary schools	Grant B.C.	Quest	73	1992
Physical activity education in the undergraduate curricula of all UK medical schools. Are tomorrow's doctors equipped to follow clinical guidelines?	Weiler, R., Chew, S., Coombs, N., Hamer, M., & Stamatakis, E	British Journal of Sports Medicine	61	2012

(Figure 10). The results of data visualization analysis using VOSViewer show that the keywords with the highest number of appearances in the research sample are physical education (107), curriculum (60), physical education curriculum (19), curriculum reform (14), physical activity (13), education (12), health (10), health and physical education (9), pedagogy (8), sport (8). Top ten high-frequency keywords and their bibliometric characteristics (including number of appearances and links, total link strength, and average year of publication) are provided in table 5. A visualization of item density of high-frequency keywords is presented in Figure 6.

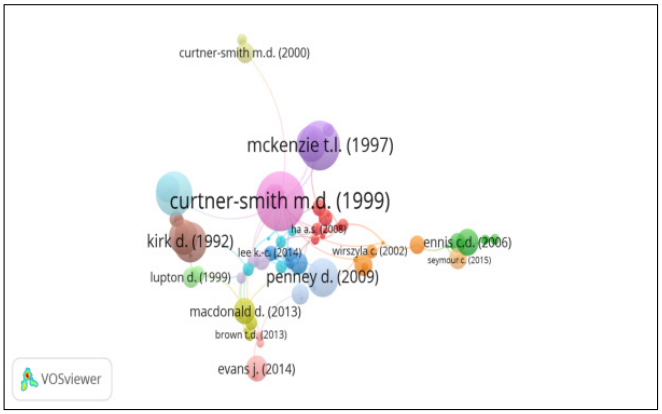

Fig 6: Author of the most cited articles in the scopus database on curriculum and physical education

Discussion

This study conducted a systematic analysis of the research literature in the field of curriculum and physical education,

Table 5: Publication profile for curriculum and physical education fields

Keywords	*Occurrences*	*Link*	*Total Links Strength*	*Average Publication Year*
Physical Education	107	40	139	2014,64
Curriculum	60	28	95	2015,42
Physical Education Curriculum	19	7	8	2013,00
Curriculum Reform	14	13	20	2015,79
Physical Activity	13	13	24	2010,00
Education	12	10	19	2017,08
Health	10	8	18	2016,00
Health and Physical Education	9	8	16	2013,33
Pedagogy	8	8	13	2014,25
Sport	8	7	14	2010,12

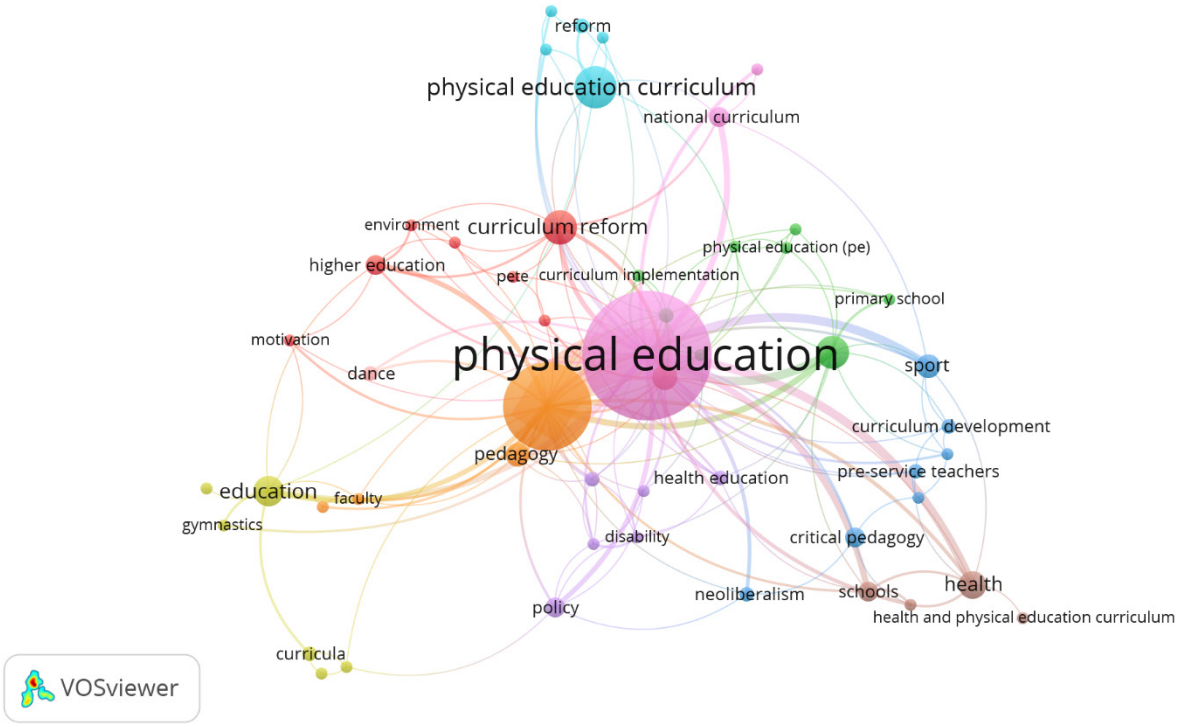

Fig 7: Co-occurrence of author keywords. of the 738 keywords, 52 meet the threshold (minimum number of occurrences of a keyword: 3)

using bibliometric analysis of 359 published and indexed article titles in the Scopus database from 1931 - 30 April 2021. The researcher also identified the types of documents that triggered the evolution of the field, journals, authors, and the most relevant articles that make a significant contribution. The increase in the number of articles published was quite significant starting from 2010 - 2010 (9 articles - 24 articles), 2017 - 2018 there was another very significant increase (19 articles - 35 articles), 2019 fell again (19 articles) and 2020 there was an increase of 36 articles. Meanwhile, in 2021 there are still 11 articles. It is possible that there will be additional additions, because it has only been running for four months, namely April. The most dominant field of study in Social Sciences with 250 publications. Monash University from Australia is the most productive institution with 9 publications, while the most published authors and the most influential cited 277 articles in this field are Matthew D Curtner-Smith. Furthermore, the European Physical Education Review became the first choice among other publication media to publish research results with 27 articles.

After analyzing the types of documents from the 359 article titles published in the Scopus database, journals are the place for publication that most researchers choose rather than proceedings. This can be seen from the number of published

articles in journals (349 articles) rather than proceedings (10 articles) from 1931-2021. The United States is the country that contributes the most authors (69 articles) and English is the language most used in writing articles in this field (266 articles), this is due to journals or proceedings indexed by Scopus generally use English.

Regarding the 10 most influential publications in the field of curriculum and physical education, the first article written by Curtner-Smith (1999) is the most cited article which discusses different teacher interpretations of the National Physical Education Curriculum policies and to identify the factors that influence these interpretations. . The second article, written by McKenzie, Sallis, Kolody, and Faucette (1997) discusses the long-term effects of physical education curricula and staff development programs. The third article, written by Enright and O'Sullivan (2010) discusses negotiating the physical education curriculum with teenage girls, the fourth article written by Kirk (1992) discusses the hidden curriculum in physical education, the fifth article written by Penney (2008) discusses the prospective policy relationship between health and physical education (HPE) and contemporary education policy that explores the opportunities and challenges that contemporary educational discourse presents for policy and curriculum development in health and physical education (HPE), the sixth article written by Valdimarsson, Linden, Johnell, Gardsell, and Karlsson, (2006) discusses the evaluation of a school curriculum-based general exercise intervention program with 60 minutes of physical activity / week, the seventh article written by McKenzie, Sallis, Faucette, Roby, and Kolody (1993) discusses influence of curricula and service programs on quantity and cauldron elementary physical education class bags, the eighth article written by Fernández-Balboa (1993) discusses the role of physical education teachers against social injustice and inequality through hidden curricula, the ninth article written by Grant (1992) discusses the integration of sports into the physical education curriculum. In schools, the tenth article written by Weiler, Chew, Coombs, Hamer, and Stamatakis (2012) discusses the provision of physical activity teaching content in the curriculum of all medical schools. Of the 10 most influential articles, three writers namely McKenzie, Faucette, and Kolody collaborated and had 2 influential articles. The hidden curriculum is an interesting topic of these 10 articles, which are discussed by two authors, Kirk (1992) and Fernández-Balboa (1993). The hidden curriculum concept has been analyzed in relation to physical education (Bain, 1975). The hidden curriculum in the field of physical education is quite interesting because in this curriculum, activities that occur in schools and influence the development of students, but are not programmed into the potential/ideal curriculum (Sukiman, 2015). Hidden curriculum objectives include implicit values, norms, daily regularities, forms of language, knowledge, and attitudes in the teaching and learning process of physical education or school. Meanwhile, the official curriculum can be categorized into psychomotor, cognitive, social, and affective domains (Marzuki, 2002). Based on the results of this study, it provides a comprehensive picture, including focus areas related to the curriculum in physical education research. It reflects the basic principles in the values and goals of the physical education curriculum.

Conclusion

This study aims to conduct a bibliometric analysis of articles published in the Scopus database on curriculum and physical education from 1931-2021 (April, 2021). Based on publications in the Scopus database, the findings reveal that: the number of publications has increased, although there is an up and down trend from year to year; most of the publications are written by researchers located in several countries and universities; The United States of America is the country that contributes the most writers; Monash University from Australia is the most productive institution; Matthew D Curtner-Smith is the author's most published and most influential cited articles; an influential topic, namely the hidden curriculum. This analysis can provide insight into the development of research in the field of curriculum and physical education, and it can be a source of information for teachers, lecturers, schools, universities, and the world of education.

Suggestion

For further researchers, they can continue mapping until the end of 2022, and use scientometric analysis with the help of ScientoPy to analyze two large databases, namely Scopus and Web of Science. Furthermore, this paper can also be used as a reference by looking at what topics are interesting and have not been discussed by previous researchers.

Limitation

The limitations of this study are that the author only limits two types of documents and sources, namely journal articles and proceedings, while in the Scopus database there are still types of source documents such as: book chapter, review, editorial, note, erratum, retracted, book, letter, and book series. However, the number of articles of this document type and source that the researcher limit is very small, and according to the author, it will not have a significant effect on this study. Researchers also only limited to one database, namely Scopus. Even though there are still many databases that can be used for this analysis, such as the Web of Science, ERIC and others.

References

Abdullah, K. H., Gazali, N., Abd Aziz, F. S., Syam, E., Muzawi, R., Rio, U., Cendra, R., & Nazirun, N. (2022). Six decades of publication performances and scientific maps on sports nutrition. *Journal*

Sport Area, *7*(1), 1–22. https://doi.org/10.25299/sportarea.2022.vol7(1).8126

Alfrey, L., & O'Connor, J. (2020). Critical pedagogy and curriculum transformation in Secondary Health and Physical Education. *Physical Education and Sport Pedagogy*, *25*(3), 288–302. https://doi.org/10.1080/17408989.2020.1741536

Alshammari, A. (2013). Curriculum Implementation and Reform: Teachers' Views About Kuwait's New Science Curriculum. *US-China Education Review*, *3*(3), 181–186.

Araújo, A. C. De, Knijnik, J., & Ovens, A. P. (2021). How does physical education and health respond to the growing influence in media and digital technologies? An analysis of curriculum in Brazil, Australia and New Zealand. *Journal of Curriculum Studies*, *53*(4), 563–577. https://doi.org/10.1080/00220272.2020.1734664

Aytan, T. (2016). Evaluation of the 2006 and 2015 Turkish Education Program in Secondary School Curriculum in Turkey in Terms of Critical Thinking. *Journal of Education and Learning*, *5*(2), 38. https://doi.org/10.5539/jel.v5n2p38

Bai, Y. (2018). Research on the design method of physical education curriculum based on the flipped classroom concept. *Kuram ve Uygulamada Egitim Bilimleri*, *18*(5), 1604–1611. https://doi.org/10.12738/estp.2018.5.059

Bain, L. L. (1975). The hidden curriculum in physical education. *Quest*, *24*(1), 92–101. https://doi.org/10.1080/00336297.1975.10519851

Cliff, K. (2012). A sociocultural perspective as a curriculum change in health and physical education. *Sport, Education and Society*, *17*(3), 293–311. https://doi.org/10.1080/13573322.2011.608935

Cretu, D. M., & Morandau, F. (2020). Initial Teacher Education for Inclusive Education: A Bibliometric Analysis of Educational Research. *Sustainability*, *12*, 1–27. https://doi.org/10.3390/su12124923

Curtner-Smith, M. D. (1999). The More Things Change the More They Stay the Same: Factors Influencing Teachers' Interpretations and Delivery of National Curriculum Physical Education. *Sport, Education and Society*, *4*(1), 75–97. https://doi.org/10.1080/1357332990040106

Dewi, A. U. (2021). Curriculum reform in the decentralization of education in indonesia: Effect on students' achievements. *Cakrawala Pendidikan*, *40*(1), 158–169. https://doi.org/10.21831/cp.v40i1.33821

Ding, Y., Rousseau, R., & Wolfram, D. (2014). *Measuring Scholarly Impact*. Springer.

Enright, E., & O'Sullivan, M. (2010). "Can i do it in my pyjamas?" negotiating a physical education curriculum with teenage girls. *European Physical Education Review*, *16*(3), 203–222. https://doi.org/10.1177/1356336X10382967

Fernández-Balboa, J.-M. (1993). Sociocultural characteristics of the hidden curriculum in physical education. *Quest*, *45*(2), 230–254. https://doi.org/10.1080/00336297.1993.10484086

Gazali, N., & Cendra, R. (2020). The validation of badminton textbook: Improving students' learning outcomes. *Universal Journal of Educational Research*, *8*(7), 3224–3229. https://doi.org/10.13189/ujer.2020.080751

Gazali, N., Cendra, R., Saputra, H. D., Saad, N. B., Winarno, M. E., Hanief, Y. N., Abdullah, K. H., Shahril, M. I., & Tulyakul, S. (2021). Trends and patterns of 2013 curriculum research in physical education: Bibliometric analysis from 2013-2020. *Multilateral : Jurnal Pendidikan Jasmani Dan Olahraga*, *20*(3), 179. https://doi.org/10.20527/multilateral.v20i3.11656

Gómez-Gonzalvo, F., Molina, P., & Devís-Devís, J. (2018). Video games as curriculum materials: an approach to their use in Physical Education | Los videojuegos como materiales curriculares: una aproximación a su uso en Educación Física. *Retos*, *34*, 305–310.

Grant, B. C. (1992). Integrating sport into the physical education curriculum in New Zealand secondary schools. *Quest*, *44*(3), 304–316. https://doi.org/10.1080/00336297.1992.10484057

Gray, S., Mulholland, R., & MacLean, J. (2012). The ebb and flow of curriculum construction in physical education: A Scottish narrative. *Curriculum Journal*, *23*(1), 59–78. https://doi.org/10.1080/09585176.2012.650487

Hanief, Y. N., Kardiyanto, D. W., Winarno, M. E., & Haqiyah, A. (2021). Development of Indonesia Scientific Publications of Physical Education in Reputable International Journals: A Bibliometric Analysis. *Jurnal Pendidikan Jasmani Dan Olahraga*, *6*(1), 59–67. https://doi.org/10.17509/jpjo.v6i1.32335

Jeong, D., & Koo, Y. (2016). Analysis of Trend and Convergence for Science and Technology using the VOSviewer. *International Journal of Contents*, *12*(3), 54–58. https://doi.org/10.5392/IJoC.2016.12.3.054

Jess, M., Atencio, M., & Thorburn, M. (2011). Complexity theory: Supporting curriculum and pedagogy developments in scottish physical education. *Sport, Education and Society*, *16*(2), 179–199. https://doi.org/10.1080/13573322.2011.540424

Jin, A. (2013). Physical education curriculum reform in China: a perspective from physical education teachers. *Physical Education and Sport Pedagogy*, *18*(1), 15–27. https://doi.org/10.1080/17408989.2011.623231

Kennedy, W., & Yun, J. (2019). Universal Design for Learning as a Curriculum Development Tool in Physical Education. *Journal of Physical Education, Recreation and Dance*, *90*(6), 25–31. https://doi.org/10.1080/07303084.2019.1614119

Kirk, D. (1992). Physical education, discourse, and ideology: Bringing the hidden curriculum into view. *Quest*, *44*(1), 35–56. https://doi.org/10.1080/00336297.1992.10484040

Lambert, K., & Penney, D. (2020). Curriculum interpretation and policy enactment in health and physical education: researching teacher educators as policy actors. *Sport, Education and Society*, *25*(4), 378–394. https://doi.org/10.1080/13573322.2019.1613636

Lee, K.-C., & Cho, S.-M. (2014). The Korean national curriculum for physical education: a shift from edge to central subject. *Physical Education and Sport Pedagogy*, *19*(5), 522–532. https://doi.org/10.1080/17408989.2014.915299

Lynch, T. (2019). Physical education and wellbeing: Global and holistic approaches to child health. In *Physical Education and Wellbeing*. Palgrave Macmillan. https://doi.org/10.1007/978-3-030-22266-6

Marzuki, C. (2002). The Hidden Curriculum: A concomitant factor in physical education curriculum implementation. *Forum Pendidikan*, 415–428.

McKenzie, T. L., Sallis, J. F., Faucette, N., Roby, J. J., & Kolody, B. (1993). Effects of a curriculum and inservice program on the quantity and quality of elementary physical education classes. *Research Quarterly for Exercise and Sport*, *64*(2), 178–187. https://doi.org/10.1080/02701367.1993.10608795

McKenzie, T. L., Sallis, J. F., Kolody, B., & Faucette, F. N. (1997). Long-Term effects of a physical education curriculum and staff development program: SPARK. *Research Quarterly for Exercise and Sport*, *68*(4), 280–291. https://doi.org/10.1080/02701367.1997.10608009

Mulyasa, H. E. (2018). *Pengembangan dan implementasi kurikulum 2013*. Remaja Rosdakarya.

Mustafa, P. S. (2020). Kontribusi Kurikulum Pendidikan Jasmani, Olahraga, dan Kesehatan di Indonesia dalam Membentuk Keterampilan Era Abad 21. *Jurnal Pendidikan: Riset Dan Konseptual*, *4*(3), 437–452. https://doi.org/10.28926/riset_konseptual.v4i3.248

O'Connor, J., & Penney, D. (2021). Informal sport and curriculum futures: An investigation of the knowledge, skills and understandings for participation and the possibilities for physical education. *European Physical Education Review*, *27*(1), 3–26. https://doi.org/10.1177/1356336X20915937

Otero-Saborido, M. F., Vázquez-Ramos, J. F., Cenizo-Benjumea, M. J., & González-Jurado, A. J. (2020). Analysis of the assessment in Physical Education curricula in Primary Education. *Sport, Education and Society*, *70*(2), 1–14. https://doi.org/10.1080/13573322.2020.1804349

Penney, D. (2008). Playing a political game and playing for position: Policy and curriculum development in health and physical education. *European Physical Education Review*, *14*(1), 33–49. https://doi.org/10.1177/1356336X07085708

Penney, D., & Jess, M. (2004). Physical education and physically active lives: A lifelong approach to curriculum development. *Sport, Education and Society*, *9*(2), 269–287. https://doi.org/10.1080/1357332042000233985

Rus, C. M., Talaghir, L.-G., Iconomescu, T.-M., & Petrea, R. G. (2019). Curriculum changes in secondary school physical education and sport subject in the Romanian education system. *Revista de Cercetare Si Interventie Sociala*, *66*, 342–363. https://doi.org/10.33788/rcis.66.20

Santos, F., Neves, R., Pereira, P., & Cardoso, A. (2020). The physical education curriculum and life skills: Processes and intervention strategies | O currículo de educaçaõ física e as life skills: Processos e estratégias de intervençaõ. *Motricidade*, *16*(2), 135–143. https://doi.org/10.6063/motricidade.18931

Scanlon, D., Calderón, A., & MacPhail, A. (2021). Teacher agency in enacting physical education in a period of curriculum change and reform in Ireland. *Curriculum Journal*, *32*(1), 48–66. https://doi.org/10.1002/curj.80

Sholichin, R., Saifudin, A., & Buana, V. G. (2019). Dynamics of Use of Methods And Teaching Books in TPQ Learning Under The Ring of LP. Ma'arif in Garum, Blitar. *Journal of Development Research*, *3*(1), 31–36. https://doi.org/10.28926/jdr.v3i1.66

Stevens, S. R., & Culpan, I. (2021). The joy of movement: the non-participant in physical education curriculum design. *Curriculum Studies in Health and Physical Education*, *12*(1), 80–93. https://doi.org/10.1080/25742981.2021.1878918

Sukiman. (2015). *Pengembangan Kurikulum Perguruan Tinggi*. Remaja Rosdakarya.

Suyanto, S. (2018). The Implementation of the Scientific Approach Through 5MS of the Revised Curriculum 2013 in Indonesia. *Cakrawala Pendidikan*, *37*(1), 22–29. https://doi.org/10.21831/cp.v37i1.18719

Valdimarsson, O., Linden, C., Johnell, O., Gardsell, P., & Karlsson, M. K. (2006). Daily physical education in the school curriculum in prepubertal girls during 1 year is followed by an increase in bone mineral accrual and bone width--data from the prospective controlled Malmö pediatric osteoporosis prevention study. *Calcified Tissue International*, *78*(2), 65–71. https://doi.org/10.1007/s00223-005-0096-6

Valencia-Peris, A., Salinas-Camacho, J., & Martos-García, D. (2020). Hidden curriculum in physical education: A case study. *Apunts. Educacion Fisica y Deportes*, *141*, 33–40. https://doi.org/10.5672/APUNTS.2014-0983.ES.(2020/3).141.04

Weiler, R., Chew, S., Coombs, N., Hamer, M., & Stamatakis, E. (2012). Physical activity education in the undergraduate curricula of all UK medical schools: are tomorrow's doctors equipped to follow clinical guidelines? *British Journal of Sports Medicine*, *46*(14), 1024–1026. https://doi.org/10.1136/bjsports-2012-091380

Yang, Y., & Liu, W. (2021). The influence of public physical education curriculum on college students' physical health | A influência da educação física pública sobre a saúde física dos estudantes universitários | Efectos de los programas de educación física pública en la salud físi. *Revista Brasileira de Medicina Do Esporte*, *27*(Special is), 83–86. https://doi.org/10.1590/1517-8692202127012020_0099

You, J. (2011). A self-study of a national curriculum maker in physical education: Challenges to curriculum change. *Journal of Curriculum Studies*, *43*(1), 87–108. https://doi.org/10.1080/00220272.2010.516023

Zhang, T., Wang, Y., Yli-Piipari, S., & Chen, A. (2020). Power of the Curriculum: Content, Context, and Learning in Physical Education. *Research Quarterly for Exercise and Sport*. https://doi.org/10.1080/02701367.2020.1768202

Zupic, I., & Cater, T. (2015). Bibliometric Methods in Management and Organization. *Organizational Research Methods*, *18*(3), 1–44. https://doi.org/10.1177/1094428114562629