Proceedings Series on Social Sciences & Humanities, Volume 25
Proceedings of International Conference on Social Science (ICONESS)
ISSN: 2808-103X

Patterns and Trends of SSCS Model Implementation in Science Literacy Development: Systematic Literature Review 2015-2024

Laksmi Fidya Arini[1], Ristiana Dyah Purwandari[2]
[1]SD Negeri Karangtalun 05, Cilacap Utara, Cilacap
[2]Magister Pendidikan Dasar, Universitas Muhammadiyah Purwokerto

ARTICLE INFO

Article history:

DOI:
10.30595/pssh.v25i.1683

Submited:
July 22, 2025

Accepted:
August 11, 2025

Published:
August 24, 2025

Keywords:

SSCS; Science Literacy; Systematic Literature Review; Science Education; 21st Century Skills; Primary and Secondary Education

ABSTRACT

This study analyzes the patterns and trends of the implementation of the Search, Solve, Create, and Share (SSCS) learning model in the development of scientific literacy through a systematic literature review in the period 2015-2024. Scientific literacy is a crucial component in 21st century education that includes not only mastering scientific concepts, but also developing the skills to apply knowledge in real life. Indonesia's low ranking in the 2022 PISA assessment (ranked 77th out of 81 countries with a score of 394) indicates the need for Learning Innovation, one of which is through the SSCS model. Using the Systematic Literature Review method, the study analyzed 40 articles from 450 identified publications. The results showed a significant increase trend in SSCs-related publications since 2019 with a cumulative annual growth of 33.2%. The research was dominated by quantitative methods (65%), followed by mixed methods (25%), and qualitative (10%). The implementation of SSCS is proven to be effective in improving various skills, including critical thinking, problem solving, creativity, and understanding concepts at various levels of Education. The implementation of the SSCS model is also successfully integrated with other approaches such as interactive multimedia, ethnoscience, TPACK, and local wisdom values. These findings imply that the SSCS model is a potential learning strategy to improve science literacy and support 21st century skills development in Indonesia.

Corresponding Author:
Laksmi Fidya Arini
SD Negeri Karangtalun 05, Cilacap Utara, Cilacap
Email: laksmiarini96@guru.sd.belajar.id

1. INTRODUCTION

In the 21st century, science literacy is becoming a key component in basic education, which focuses not only on mastering scientific concepts, but also on developing students ' skills in applying science knowledge in everyday life. Science literacy is an important foundation for students to understand natural phenomena, solve real-life problems, and make informed decisions based on scientific evidence. In the context of basic education, science literacy is expected to equip students with the necessary skills to become critical, creative, and high problem-solving individuals [1]

[1] Listia, AP, Wijayanti, A., Ernawati, T., & Septiani, D. Integrasi budaya lokal dalam model pembelajaran Search, Solve, Create and Share (SSCS) untuk meningkatkan literasi sains: Tinjauan pustaka. Jurnal Penelitian Pendidikan Sains. 2025;15(148):357-374

Scientific literacy in this era of globalization plays a very important role, especially for the younger generation who will become leaders of the future. Science literacy skills are not only limited to understanding basic concepts such as the laws of nature and the principles of physics, chemistry, or biology, but also include the ability to identify problems, collect data, conduct experiments, and draw conclusions based on scientific evidence. In elementary school, scientific literacy serves as the foundation for developing critical and analytical thinking skills that will be useful in various aspects of life and in various fields of study in the future.[2]

However, in Indonesia, the level of science literacy of students is still relatively low. This is evident from the results of the international evaluation conducted by the Program for International Student Assessment (PISA). In the 2022 PISA assessment, Indonesia ranked 77 out of 81 countries in the science category with a score of 394, which is far below the average score of Organization for Economic Cooperation and Development (OECD) countries which reached 485.[3] This figure shows a significant gap in the achievement of science literacy in Indonesia, which is a big problem in improving the quality of education at the elementary level. This low scientific literacy is due not only to the lack of understanding of scientific concepts, but also to the lack of students ' skills in applying such knowledge in the context of everyday life.

To address these challenges, innovative learning approaches that can improve early science literacy skills are essential. One of the learning models that has proven effective in improving science literacy skills is the Search, Solve, Create, and Share (SSCS) model. The Model was first developed by Pizzini in 1988 and is designed to extend Science Learning with a problem-solving-based approach.[4] This Model involves four successive stages: (1) Search, which identifies the problem, (2) Solve, by planning and implementing problem solving, (3) Create, which organizes the results and concludes, and (4) Share, which communicates findings.

The SSCS Model is very much in line with the principles of constructivist learning, which views that knowledge is not only conveyed to students, but actively constructed by students through meaningful learning experiences.[5] Through this approach, students are given the opportunity to take an active part in the learning process, so that they not only memorize facts, but also develop high-level thinking skills, such as critical, analytical and creative thinking, which is an important part of scientific literacy. This Model also provides space for students to learn through exploration and investigation, which are crucial components in the science learning process.

Several previous studies have shown that SSCs models can improve critical thinking[6] skills, math problem solving skills,[7] and generic science skills.[8] However, the implementation of the SSCS model in the context of Science Learning in elementary schools in Indonesia is still limited. Therefore, further research is needed to comprehensively examine the application of this model in the development of scientific literacy of students at the basic education level.

This study aims to analyze pola and tren implementasi SSCs Model in developing science literacy of elementary school students based on a systematic literature review between 2015 to 2024.[9] This study will answer two main problems: what is the development trend of research on the SSCS model for the development of science literacy during the period 2015-2024? What is the pattern of SSCs model implementation in science learning based on systematic literature review?

2. RESEARCH METHODS

This study uses the Systematic Literature Review (SLR) method, which is a research method that aims to identify, evaluate, and interpret relevant research results related to a particular research question in a systematic and structured manner. This approach helps to gain a deep understanding of the topic under study thru the synthesis of various existing research results, as well as provide a stronger basis for the development of Science in the relevant field. Dalam penelitian ini, SLR diterapkan untuk mengeksplorasi penerapan model Search, Solve,

[2] Rahmawati, L. Implementasi model SSCS untuk meningkatkan literasi sains siswa sekolah dasar selama pembelajaran pasca pandemi. Jurnal Penelitian Pendidikan Dasar. 2022;4(3):215-228

[3] OECD. Hasil PISA 2022 (Volume I): Keadaan Pembelajaran dan Kesetaraan dalam Pendidikan. Penerbitan OECD; 2023

[4] Pizzini, EL, Abell, SK, & Shepardson, DS Memikirkan kembali pemikiran di kelas sains. Guru Sains. 1988;55(9):22-25

[5] Aringga Rakhmi, D., Mastur, Z., Negeri, S., & Soekarno Hatta Kendal, J. Pembelajaran matematika konstruktivisme dengan model Search, Solve, Create, and Share (SSCS) untuk meningkatkan disposisi matematika dan pemahaman konsep siswa pada materi limit fungsi kelas XI IPA. Jurnal Penelitian Pendidikan Matematika Unnes. 2018;7(2):117-122

[6] Milama, B., Bahriah, ES, & Mahmudah, A. Pengaruh model pembelajaran Search, Solve, Create, And Share (SSCS) terhadap kemampuan berpikir kritis siswa. Jurnal Penelitian Dan Pembelajaran IPA. 2017;3(2):112-122. https://doi.org/10.30870/jppi.v3i2.2574

[7] Zulkarnain, Zulnaidi, H., Heleni, S., & Syafri, M. Pengaruh model pembelajaran SSCS terhadap kemampuan pemecahan masalah matematika dan efikasi diri siswa. Jurnal Pembelajaran Internasional. 2021;14(1):475-488. https://doi.org/10.29333/IJI.2021.14128A

[8] Nastiti, D., Rahardjo, SB, & Van Hayus, ES Penggunaan modul berbasis mencari, memecahkan, membuat, dan berbagi efektif untuk meningkatkan keterampilan generik sains siswa. Jurnal Fisika: Seri Konferensi. 2019;1175(1):012145. https://doi.org/10.1088/1742-6596/1175/1/012145

[9] Kitchenham, B., & Charters, S. Pedoman untuk melakukan Tinjauan Literatur Sistematis dalam Rekayasa Perangkat Lunak. Laporan Teknis EBSE 2007-001, Laporan Bersama Universitas Keele dan Universitas Durham; 2007.

Create, and Share (SSCS) dalam pengembangan literasi sains di sekolah dasar. The SLR procedure used in this study adapts the stages which include several important steps, namely: formulation of research questions, Library search, study selection, quality assessment, data extraction, and data synthesis. Each of the stages will be described in detail as follows :

a. Formulation of research questions, formulated to identify and evaluate the application of the SSCS model in the development of science literacy in primary schools. Developed research questions include:

1) What is the trend of SSCs model research for the development of science literacy in primary schools during the period 2015-2024?. This question aims to identify how the development of SSCs model research related to science literacy in the specified period.
2) What is the pattern of implementation of the SSCS model applied in science learning in elementary school? Thisquestion aims to determine the methods and patterns of application of the SSCS model in science learning in elementary school.

b. Literature search, conducted to identify articles that are relevant to the topic of this study. Literature search is conducted in three main databases that are widely known in the academic world, namely Google Scholar, Scopus, and Garuda. Dengan kata kunci yang digunakan dalam pencarian meliputi "SSCS" ATAU "Search Solve Create Share", "literasi sains" ATAU "scientific literacy", "sekolah dasar" ATAU "elementary school".The search process is limited to articles published in national or international scientific journals in the period 2015-2024 to ensure the relevance and current research results. This step aims to collect the latest research related to the topic under study.

c. Selection of studies, conducted to determine compliance with the inclusion and exclusion criteria that have been determined. The selection process is carried out through several stages of screening starting from the identification of articles to the selection of relevant articles. Inclusion criteria applied in this study are:

Table 1. Inclusion Criteria

No.	Description
1	Article that focuses on the implementation of the SSCS model in learning.
2	Research involving elementary school, junior high school and Senior High School students with science subjects (Biology, Physics, Mathematics)
3	Articles that explicitly discuss the impact of the SSCS model on scientific literacy.
4	Articles published in Indonesian or English.

Table 2. Exclusion Criteria

No.	Description
1	Review article, conference proceedings, book, thesis, or dissertation.
2	studies that did not focus on the SSCs model.
3	studies that did not involve elementary school students.
4	articles not related to the development of scientific literacy.
5	articles that are not available in full text.

The selection process carried out resulted in 450 articles being identified at an early stage, with 73 articles being excluded for duplication. After filtering the headings and abstracts, 273 articles were excluded, and at the stage of filtering the full text, 253 articles were excluded for not meeting the inclusion criteria. At akhirnya, 40 articles that met the inclusion criteria were selected for further analysis.

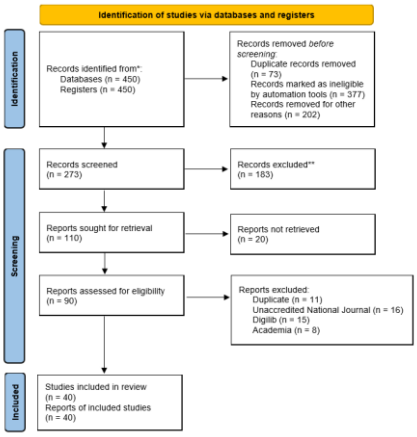

Figure 1. PRISMA SSCS

d. Assessment of the quality of the study, seach selected article was assessed for its quality using instruments adapted from the Critical Appraisal Skills Program (CASP). This quality assessment involves several aspects, such as theexplanation of theresearch pobjectives : are the objectives of the study clearly explained and in accordance with the context?, k, methodologyconformance : is the methodology used in the study in accordance with the questions and objectives of the study?,research pdesign: is theresearch design used valid and reliable to produce reliable results?. Data collection techniquespengumpulan d: how is data collected and what are the appropriate data collection techniques used? Andnalisis aanalysis: is the data analysis done appropriately and according to the type of data collected?, furthermore, presearch contribution: what is the contribution of research to the development of science, especially in the field of scientific literacy? Each article is given a score of 0-2 for each criterion, with a maximum total score of 12. Articles with scores of 8 are considered to be of good quality and deserve to be included in this literature review.

e. Data Extraction. The Data extracted from each selected article includes several important elements for further analysis, includingI nbibliographic information: name of the author, year of publication and country where the research was carried out. Purpose of the study: the main purpose of the research carriedout, methodology: the type of methodology used, for example, quantitative, qualitative, or mixed. Sample: characteristics of the sample used in the study, such as the number of students or classes involved. Results: the main findings obtained from the study. Findings: an analysis of the impact of the SSCS model on scientific literacy and other relevant aspects.

f. Data Synthesis. At the stage of data synthesis, the results of data extraction that has been analyzed using a thematic approach. This approach aims to identify patterns, trends, and the effectiveness of SSCs model implementation in improving science literacy in primary schools. Data synthesis is done by mcategorizing research results based on relevant themes. Identify similarities and differences between the various studies analyzed. Linking research results with research questions that have been formulated. The results of this data synthesis will provide a comprehensive overview of trends, implementation patterns, and the effectiveness of the SSCS model in the development of science literacy in elementary schools.

The SLR procedure applied in this study aims to gain a deeper understanding of the application of the SSCS model in science learning in elementary schools, with a focus on science literacy. The rigorous selection process, meticulous quality assessment, and structured data extraction and synthesis are expected to contribute significantly to the development of more effective and innovative learning methods in improving the scientific literacy of Primary School students

3. RESULTS AND DISCUSSIONS

Analysis of SSCs model research trends in the literature under review showed a significant increase in the number of publications during the period 2015-2024. Figure 2 illustrates the development of the number of publications related to the SSCS model for the development of science literacy in elementary schools from year to year. Tren publikasi penelitian menunjukkan bahwa model SSCS (Search, Solve, Create, Share) dari tahun 2015 hingga 2024. This bar graph shows a significant increase in the number of annual publications since 2019. In 2016 to 2018, the number of publications was still relatively low, with only one to seven publications per year. However, in 2019 there was a noticeable surge, which indicates a greater interest in the SSCs model in the context of developing scientific literacy. The peak of publications occurred in 2022-2023, with 8 to 10 publications per year, indicating that this model is increasingly being applied and researched.

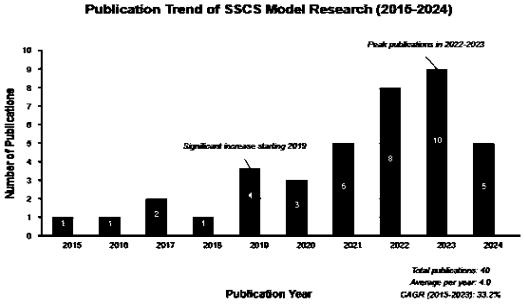

Figure 2. Trend SSCS Model Research (2025-2024)

The Data also shows that the cumulative annual growth trend (CAGR) between 2015 to 2023 is 33.2%, which indicates that interest in the SSCS model in Science Education Research and application is growing. The Total publications recorded during the period 2016-2024 are 40 publications, with an average of 4 publications per year. This graph illustrates the importance of the SSCS model in the development of science literacy, especially among educators and researchers in the field of primary education.

In terms of research methods, as shown in Figure 3, the study was dominated by quantitative methods (65%), followed by mixed methods (25%), and qualitative (10%). The predominance of quantitative research indicates a focus on empirical measurements of the effectiveness of SSCs models.

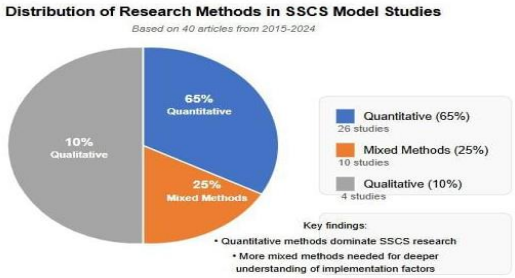

Figure 3. Distribusi Of Research Methods

The figure presents a visualization of the distribution of research methods used in the study of models of complex social systems (SSCS) based on the analysis of 40 articles published between 2015 and 2024. Data representation using pie charts clearly shows the proportion of use of each methodological approach. The majority of studies in that time span, amounting to 65% or the equivalent of 26 articles, relied on quantitative methods. The next significant proportion is occupied by mixed methods with a representation of 25% or 10 studies. Meanwhile, qualitative methods occupy the smallest portion, which is only 10% or 4 studies from the entire sample of articles analyzed.

The key findings presented indicate that SSCS research is dominated by a quantitative approach. Furthermore, it is concluded that there is a greater need for the use of mixed methods to gain a deeper understanding of implementation factors in the context of SSCS. Thus, this visualization succinctly but informatively describes the methodological landscape of SSCS research in the last decade, highlighting the trend of dominance of quantitative methods and the urgency of integration of mixed approaches for enrichment of understanding of complex phenomena.

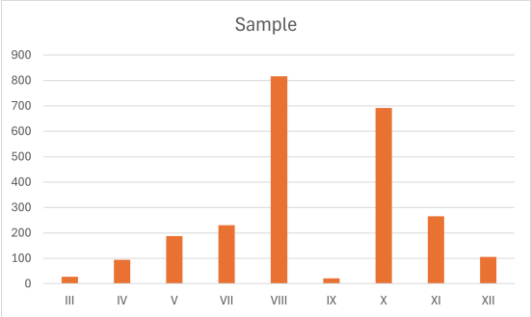

Figure 4. Sample Distribution

The distribution of samples by grade level showed a fairly wide distribution from Grade III of elementary school to Grade XII of high school, with the total sample size reflecting the comprehensive scope of research on different levels of cognitive development of learners. The highest number of samples was in Class VIII with 816 respondents, followed by Class X with 692 respondents and Class VII with 230 respondents. This shows that the main focus of the study is directed to the Junior High School and early high school levels, which are psychologically important transition phases in the formation of critical thinking skills, problem solving, and creativity of learners. Meanwhile, at the elementary school level such as Grade III, IV, and V, the number of samples also showed significant presence, especially in Grade V with 188 respondents, indicating attention to the formation of cognitive foundations from an early age.

The variation in the number of samples at each level of education can also reflect the distribution of the implementation of the Search, Solve, Create, and Share (SSCS) learning model which is increasingly widely adopted at the secondary level compared to the basic level. This is in line with the more complex pedagogical needs at the secondary level, which demand learning strategies capable of stimulating higher-order thinking skills. The presence of samples at the upper levels such as Class XI and XII (with 266 and 106 respondents respectively) is also important because it provides a foundation for assessing the effectiveness of the SSCS model in the context of academic readiness towards higher education. The existence of data from low to high levels makes this study a significant contribution in describing the cross-level effectiveness of the SSCs learning model, as well as the

potential for its replication widely in the national education system to support the strengthening of scientific literacy, numeracy, and character of Indonesian students.

3.1 Citation

Based on the citation chart shown, there is a very noticeable disparity between scientific works with a high number of citations and other works that only get a little or even no citation at all. There are several significant peaks in the index range from 1 to 15, where the highest citations reach almost 50 times. This indicates that the works on the index, which are likely to be early publications or have highly relevant topics, managed to attract wide attention from the academic community. Meanwhile, the index range of 16 to 41 shows a flat trend with a low and even number of citations, indicating that although the quantity of publications is quite large, not all of them have the same academic appeal.

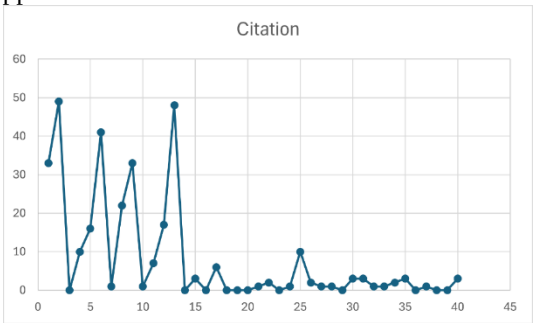

Figure 5. Citations

This phenomenon underlines the importance of quality, relevance of topics and dissemination strategies in scientific publications. Highly cited works are likely to raise contemporary issues or have strong theoretical and practical contributions, as well as being published on high-visibility channels. On the other hand, low citations in most other publications need to be observed as a signal to evaluate methodological approaches, research novelty, and the effectiveness of publications and academic networks. In the context of scientific development and educational policy, the distribution of citations provides empirical evidence that the quality and relevance of research determine its impact more than quantity alone.

3.2 Journal Publication

The distribution of research publications based on the type and level of publication shows diversity and significant academic achievement in the development and implementation of the Search, Solve, Create, and Share (SSCS) learning model. There are a total of 33 publications spread at various levels, ranging from Sinta 1 (S1) (1), Sinta 2 (S2) with a number of (8), sinta 3 (S3) (7), which indicates the interest and consistency of academics in researching the effectiveness of the SSCS model at various levels of Higher Education. The existence of 10 publications in Sinta 4 (S4),as well as the presence of international publications of 4 articles and 7 articles in scientific proceedings, shows the wider spread and recognition of this model in the national and international academic spheres. In addition, there is one publication in the reputable journal Scopus (Q4), which reinforces the scientific validity and potential contribution of SSCS to the global literature on learning innovation.

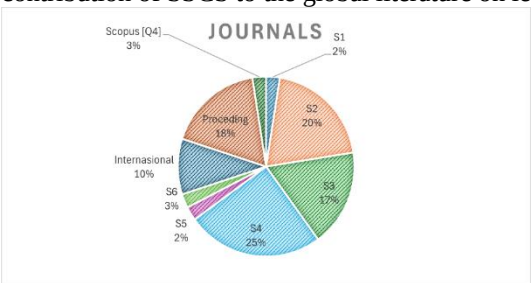

Figure 6. Journal

The achievement of this publication in various forms provides empirical evidence that the SSCS model is not only accepted in the domestic academic environment, but also has relevance and competitiveness in international scientific forums. The existence of articles in Scopus journals is an important indicator that this pedagogical approach has met globally recognized methodological standards and scientific contributions. The

variety of publication types also shows that the SSCS model has been explored from various points of view and educational contexts, both through quantitative, qualitative approaches, and the development of teaching tools.

Thus, the integration of the results of this publication can strengthen the theoretical and practical foundations in encouraging the wider adoption of the SSCS model in the education system, while enriching the scientific discourse on the transformation of 21st century skills-based learning. Based on the analysis of 40 reviewed articles, the main characteristics of research involving the SSCS model for the development of scientific literacy are presented in Table 3.

Table 3. Publication Analysis

No	Author	Topic	Vol/No	Publisher	Citations
1	Yusnaeni, Aloysius Duran Corebima, Herawati Susilo, Siti Zubaidah. 2017	Creative Thinking of Low Academic Student Undergoing Search Solve Create and Share Learning Integrated with Metacognitive Strategy	V10,N2	International Journal of Instruction	33
2	Burhanudin Milama, Evi Sapinatul Bahriah, Amaliyyah Mahmudah. 2017	The Effect of Search, Solve, Create, And Share (SSCS) Learning Model towards Student's Critical Thinking Skills	V3.N2	JPPI : Jurnal Penelitian dan Pembelajaran IPA	49
3	Via Indriana Putri, Yeni Asmara, Sujarwo. 2023	Penerapan Model Pembelajaran Search, Solve, Create, And Share (SSCS) Terhadap Hasil Belajar IPA Siswa Kelas IV SD Negeri 56 Lubuklinggau	V14,N2	Jurnal Genta Mulia	0
4	Asa Kuntifatin Warda, Mashuri Mashuri, Amidi Amidi. 2017	The Effectiveness of SSCS Learning Model with KNWS Strategy towards Mathematical Creative Thinking Ability and Self Confidence of Students	V6,N3	Unnes Journal Of Mathematics Education	10
5	Delta Aringga Rakhmi , Kartono Kartono , Zaenuri Mastur. 2018	Constructtivism Mathematics Learning with Search, Solve, Create, and Share (SSCS) Model to Improve Mathematics Disposition and Student Concept Understanding of Limit Function Materials of XI Natural Science Class	V7,N1	UJMER : Unnes Journal of Mathematics Eduction Research	16
6	Deanita Nastiti, S. B. Rahardjo, Elfi Susanti VH, R. Prime. 2018	The Need Analysis of Module Development Based on Search, Solve, Create, and Share to Increase Generic Science Skills in Chemistry	V7,N4	JPI : Jurnal Pendidikan IPA Indonesia (Indonesian Journal of Science Education)	41
7	Subandiyantoro Subandiyantoro, Baskoro Adi Prayitno, Mohammad Masykuri. 2018	Penggunaan Model Problem Solving Dan Model Problem Posing Disertai Bridge Card Game Terhadap Prestasi Belajar Biologi Ditinjau Dari Kreativitas Dan Kemampuan Berpikir Analitis Siswa Kelas X SMA Wahidiyah Kota	V7,N3	Inkuiri : Jurnal Pendidikan IPA	1

No	Author	Topic	Vol/No	Publisher	Citations
		Kediri Tahun Pelajaran 2015/2016			
8	L Sukariasih, A S Ato, S Fayanto,L O Nursalam and L Sahara. 2019	Application of SSCS model (Search, Solve, Create and Share) for improving learning outcomes: the subject of optic geometric	V321,Issue 3	Journal of Physics: Conference Series (PURPOSE LED PUBLISHING	22
9	Rahma Diani, Hesti Herliantari, Irwandani Irwandani, Antomi Saregar, Rofiqul Umam. 2019	Search, Solve, Create, and Share (SSCS) Learning Model: The Impact on the Students Creative Problem-Solving Ability on the Concept of Substance Pressure	V9.N1	Jurnal Penelitian Fisika dan Aplikasinya (JPFA)	33
10	Deanita Nastiti, S B Rahardjo and E S Van Hayus. 2019	The effectiveness chemistry module based on search, solve, create, and share (SSCS) to increase science generic skill	V1157, ISsue4	Journal of Physics: Conference Series (PURPOSE LED PUBLISHING	1
11	Sugiarti Sugiarti, Mega Teguh Budiarto, Tatag Yuli Eko Siswono. 2020	Application of Learning Model Search, Solve, Create, and Share (SSCS) to Increase Quantitative Mathematical Reasoning of Students	Proceding 2020, Mathematics, Informatics, Sciens, Education Internasional Conference (MISEIC), 3 Oktober	Universitas Negeri Surabaya	7
12	Muhammad Syafri, Zulkarnain, Maimunah.2020	The Effect of SSCS Learning Model on the Mathematical Problem Solving Ability of Junior High School Students, Kampar Regency	V4,N2	Journal of Educational Sciences	17
13	Isna Rafianti, Khairida Iskandar, Lilis Haniyah.2020	Pembelajaran Search, Solve, Create and Share (SSCS) untuk Meningkatkan Pemahaman Konsep dan Disposisi Matematis Siswa	V4,N1	Journal of Medives : Journal of Mathematics Education IKIP Veteran Semarang	48
14	Mardiana Sari, Zulfahita, Emi Sulistri.2021	Pengaruh Model Pembelajaran Search, Solve, Create, And Share (SSCS) Berbantuan Video Etnosains Terhadap Hasil Belajar Kognitif Siswa Pada Mata Pelajaran IPAS Kelas V SDN 4 SELAKAU	V9.N4	Pendas : Jurnal Ilmiah Pendidikan Dasar	0
15	Putu Dian Prawindaswari, I Made Suarjana, I Wayan Widiana. 2021	Pengaruh Model Pembelajaran Search, Solve, Create, And Share (SSCS) Terhadap Hasil Belajar IPA Siswa Kelas IV SD Gugus VI Kecamatan Sukasada	V3,N1	Mimbar PGSD Undiksha	3

No	Author	Topic	Vol/No	Publisher	Citations
		Kabupaten Buleleng Tahun Ajaran 2014/2015			
16	Diyah Ayu Widyaningrum; Titik Wijayanti; As'ad Syamsul Arifin; Erfitra Rezqi Prasmala; Nikmatul Iza; Nila Kartika Sari; Nuril Hidayati; Dwi Candra Setiawan; Wilyati Agustina; Ardian Anjar Pangestuti; Purwaning Budi Lestari; Khoirun Nisa. 2021	Empowering students' generic science skill through search, solve, create and share (SSCS) learning models with video media in biochemistry	Precedings Vol. 2330, Issue 1	AIP Conference Proceedings	0
17	Haifa Nurul Fatiyah, Rahmi Susanti, Lucia Maria Santoso. 2021	the effect of the application of the Search, Solve, Create and Share learning Model on the high level of thinking ability of students in Class XI of SMA Unggul Negeri 4 Palembang on learning material excretion System	V1.N1	Seminar Nasional Pendidikan IPA	6
18	Ni Gusti Ayu Mahayuniari, Ida Bagus Gede Surya Abadi, Ni Wayan Suniasih. 2021	Model Pembelajaran Search, Solve, Create, and Share Berbantuan Media Kartu Bergambar: Solusi Meningkatkan Kompetensi Pengetahuan IPAS	V7.N3	Journal of research and development of Science and Humanities	0
19	Hamdana Hadaming. 2021	The Effect of Search, Solve, Create and Share (SSCS) Learning Model on Mathematics Problem Solving Ability Based on Self-Efficacy of Elementary School Students	Proceding 2021	Proceedings of the International Conference on Educational Studies in Mathematics (ICoESM 2021)	0
20	Tiyaswati, Sarwanto, Sukarmin. 2021	Students' creative and innovation skill on chapter of Newton's law using SSCS learning model	Internasional Conference V1860	Journal of Physics: Conference Series (PURPOSE LED PUBLISHING	0
21	A R Handayani, Muhibbuddin, Muhammad Syukri, Elisa. 2021	The Effectivity of Search, Solve, Create, and Share (SSCS) Learning Model on Improving the Critical Thinking Skills of Students in SMA 9 Banda Aceh	Proceedings of the 2nd International Conference on Science, Technology, and Modern Society (ICSTMS 2020)	Atlantis Press (Spinger Nature)	1
22	Diyah Ayu Widyaningrum; Titik Wijayanti; As'ad	Empowering students' generic science skill through search, solve, create and	Procedings Vol. 2330, Issue 1	AIP Conference Proceedings	2

No	Author	Topic	Vol/No	Publisher	Citations
	Syamsul Arifin; Erfitra Rezqi Prasmala; Nikmatul Iza; Nila Kartika Sari; Nuril Hidayati; Dwi Candra Setiawan; Wilyati Agustina; Ardian Anjar Pangestuti; Purwaning Budi Lestari; Khoirun Nisa. 2021	share (SSCS) learning models with video media in biochemistry			
23	Romadhini Listyautami Anggraeni, Puji Rahmawati, Dhuta Sukmarani, Endah Trie Mulyosari. 2022	Meningkarkan Pemahaman Konsep Matematika siswa Kelas III Sekolah Dasar Melalui Penerapan Model Pembelajaran SSCS (Search, Solve, Create, and Share) Berbantuan Media Block Dienes	V8,N1	ELSE (Elementary School Education Journal): Jurnal Pendidikan dan Pembelajaran Sekolah Dasar	0
24	Nelita Indah Islami, Khaerudin Kurniawan, Andoyo Sastromiharjo. 2022	Model Pembelajaran Search, Solve, Create, And Share (SSCS) Sebagai Inovasi Pembelajaran Menulis Teks Eksplanasi	Proceding V.XVII	Universitas Pendidikan Indonesia	1
25	Maimun Maimun, Bahtiar Bahtiar. 2022	The Effect of Search, Solve, Create, And Share (SSCS) Learning Models Assisted Multimedia Interactive to Improve Creative Thinking Ability and Student Learning Outcomes	V8, N4	JPPIPA : Jurnal Penelitian Pendidikan IPA	10
26	Fadhliyatul Ulya , Masturi Masturi , Partaya Partaya. 2023	The Development of Science Learning Tools with the SSCS Model Integrated with Islamic Values to Improve Critical Thinking Skills	V12.N2	JISE : Journal of Unnovative Science Education	2
27	Randi Sudirman, Khalifah Mustami, Muh. Neat. 2023	the effectiveness level of the learners worksheet (LKPD) is based on the SSCs Learning Model Class XI of SMA Negeri 1 Majene	V11.N3	Jurnal Diskursus Islam	1
28	Ahmad Syamsuadi. 2023	Efektivitas Pembelajaran Matematika Melalui Penerapan Search, Solve, Create, And Share (SSCS) Pada Siswa SMP	V3,N1	Jurnal Riset dan Inovasi Pembelajaran	1
29	Ilham Kamaruddin, Irvan Irvan,Yoseb Boari, Bayu Purbha Sakti, Yance Manoppo. 2023	The Effectiveness Analysis Of Search, Solve, Create And Share (Sscs) Learning Model Implementation On Students' Cognitive Ability	V5,N1	MUDIR : Jurnal Manajemen Pendidikan	0
30	Evi Suryawati; Y. Yennita; Siti Rahmi Afwa; Putri Rahma	Real Action Based on Search Solve Create and Share (SSCS) Model to	V9,N3	JPBI : Jurnal Pendidikan Biologi Indonesia	3

No	Author	Topic	Vol/No	Publisher	Citations
	Dianti; S. Syafrinal. 2023	Improve Sustainability Awareness of Junior High School Students			
31	Ahmad Saroji , Undang Rosidin , Chandra Ertikanto , Kartini Herlina , Munadhirotul Azizah. 2023	CS Model Based E-Worksheet: Needs Analysis to Stimulate Critical Thinking Skills	V9,N6	JPPIPA : Jurnal Penelitian Pendidikan IPA	3
32	Syamsurizal , Irdawati , Violita , Refni Syahleli Afni , Muhamad Sholichin. 2023	The Validity and Practicality of SSCS-Based Student Worksheet on Ecology Material and Environmental Change	V9,N12	JPPIPA : Jurnal Penelitian Pendidikan IPA	1
33	Lissa Zikriana , Fatimah , Bulan Nuri. 2023	Development of SSCS-Based Teaching Materials Integrated with TPACK in Cultivating Students' Scientific Attitudes	V9,N11	JPPIPA : Jurnal Penelitian Pendidikan IPA	1
34	Hayatul Fitri Yunizal, Fadhilaturrahmi Fadhilaturrahmi, Moh. Fauziddin, Rusdial Marta,Putri Hana Pebriana. 2023	Improving Problem-Solving and Mathematical Self-Efficacy through the SSCS Model Based on Local Wisdom in Elementary School	V5,N4	Journal Education Research	2
35	Vingky Zulfa Asria, Suci Nurhayati. 2024	application of the SSCs learning Model to analyze algebraic thinking skills and understanding of concepts and mathematical thinking habits of students	V4.N1	Jurnal Jendela Pendidikan	3
36	Desvica Simanullang, Ashar Hasairin Harahap, Martina Restuati. 2024	Development of Student Worksheets Based on The Search, Solving, Create and Share (SSCS) Learning Model to Improve Critical Thinking Skills in Biology Learning for Third Level (XII) of Senior High School SMA Negeri 1 Pantai Labu	V10,N2	Jurnal Pembelajaran dan Biologi Nukleus (JPBN)	0
37	Fredi Ganda Putra, Antomi Saregar, Rahma Diani, Misbah Misbah, Santi Widyawati, Khoirunnisa Imama. 2024	Enhancing mathematical reasoning: role of the search, solve, create, and share learning	V18.N3	Journal of Education and Learning	1
38	Mia Efiana, Sri Jumini, P Parmin, Mila Ariyani. 2025	Implementation of the Search, Solve, Create and Share (SSCS) Learning Model to Improve Critical Thinking Skills	V11,N1	GRAVITY : Jurnal Ilmiah Penelitin dan Pembelajaran Fisika	0
39	Wa Ode Devana Mulfi, Rasmuin Rasmuin, Dian Lestari. 2025	Pengaruh Model Pembelajaran Search Solve Create Share (SSCS) Terhadap Kemampuan	V11.N1	Jurnal Akademik Pendidikan Matematika	0

No	Author	Topic	Vol/No	Publisher	Citations
		Pemahaman Konsep Matematika Pada Siswa di SMA Negeri 1 Batauga			
40	Derma Harianja, Lois Oinike Tambunan, Yoel Octobe Purba. 2025	Pengaruh Model Pembelajaran Search, Solve, Create and Share (SSCS) Terhadap Kemampuan Pemecahan Masalah Matematis Siswa Kelas VIII	V5,N3	Jurnal RECTUM : Tinjauan Yuridis Penanganan Tindak Pidana	3

Based on the analysis of the publications presented with the Search, Solve, Create, and Share (SSCS) learning model, it can be concluded that this approach has been widely applied in various fields of education, especially in the development of critical thinking, problem solving, and generic science skills. The Data shows that SSCS is not only applied to science subjects such as physics, chemistry, and biology, but also has penetrated into mathematics education, basic education, even language learning and character education.

The publication period from 2017 to 2025 shows the consistency and growth of academic interest in the effectiveness of this model, especially at the level of primary and Secondary Education. Most studies have found that SSCs integration improves students ' learning outcomes, high-level thinking skills (HOTS), and scientific attitudes and mathematical dispositions. In some studies, SSCS is also combined with video media, ethnoscience, interactive multimedia, and local wisdom values, which further enriches pedagogical innovation.

Dari perspektif kontribusi ilmiah, kehadiran SSCS dalam berbagai jurnal bereputasi, baik nasional maupun internasional seperti Journal of Physics: Conference Series, AIP Conference Proceedings, hingga Journal of Education and Learning, menunjukkan bahwa model ini memiliki daya tarik penelitian yang tinggi dan relevansi global. The articles are not only experimental but also developmental (developmental research), including the creation of modules, student worksheets (LKPD), and other learning tools based on SSCS.

The application of this model also shows a positive impact on affective aspects of students, such as increased self-confidence and mathematical thinking habits, which are indicators of the long-term success of 21st Century Education. Therefore, it can be concluded that the SSCs model has the potential as a best practice in constructivism-based learning that is responsive to new literacy challenges and educational innovation needs.

Furthermore, the results of citations from various articles obtained diverse results, reflecting the spectrum of research impacts of highly influential, specific or new, comprehensively investigated research topics centered on exploration, implementation, and evaluation of effectiveness with the Search, Solve, Create, and Share (SSCS) learning model. The researches conducted in depth perspective analysis can analyze the ability of the SSCS D modelengan by accelerating the mastery of various crucial competencies of students, especially in scientific literacy, critical and creative thinking skills, problem-solving skills, and a robust understanding of concepts in various disciplines, with a strong emphasis on the realm of Science (Science, Physics, Chemistry, Biology) and mathematics.

This research is not only limited to measuring cognitive learning outcomes, but also includes the development of innovative learning instruments(modules, worksheets, digital media), impact analysis on affective aspects such as mathematical disposition and scientific attitude, as well as exploration of the integration of SSCS models with complementary pedagogical strategies using metacognitive approaches, the use of technology, ethnoscience, and internalization the values of local wisdom and religion, can target students from primary to upper secondary education in order to answer the challenges of today's competency needs.

3.3 Patterns based on research topics

The Search, Solve, Create, and Share (SSCS) learning Model is a constructivistic approach designed to develop high-level thinking skills of learners, including critical thinking, creative, problem solving, and understanding concepts in depth. This Model consists of four main stages: search (looking for information), solve (solving problems), create (creating solutions or products), and share (sharing results and reflections). In various studies, the application of the SSCS model has been proven to improve student learning outcomes at various levels and subjects, ranging from science, mathematics, biology, to writing skills. SSCS emphasizes the activeness of

learners in the learning process, allowing them to experience firsthand the process of knowledge construction, as well as increasing metacognition and self-confidence through collaborative engagement.[10]

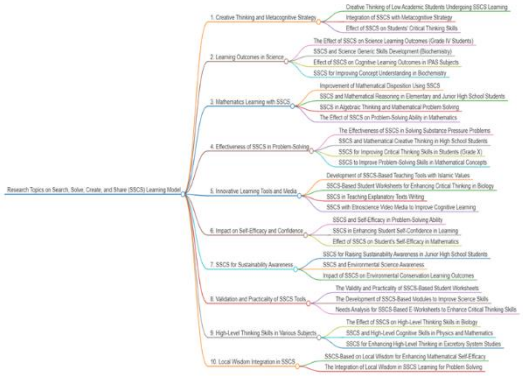

Figure 7. Pattern Of Research Topics

Empirically, the integration of the SSCS model with other strategic approaches, such as the use of video media, interactive multimedia, local values, and TPACK principles and Islamic values, further strengthens its effectiveness in developing student competencies holistically. Studies have shown that SSCS not only improve cognitive skills such as critical and creative thinking, but also have an impact on affective and psychomotor students, including scientific attitudes, mathematical dispositions, and awareness of environmental sustainability. With flexible and integrative characteristics, the SSCS model is a relevant learning innovation in responding to the demands of Independent curricula and 21st century learning that emphasizes literacy, collaboration, and character strengthening in an active and reflective learning environment.

4. CONCLUSIONS

Based on a systematic literature review of 40 articles on the implementation of the SSCS model in the development of scientific literacy for the period 2015-2024, it can be concluded that interest in this model has increased significantly, especially since 2019. The analysis showed that the SSCS model is not only effective in improving science literacy, but also has a positive impact on the development of various cognitive and affective skills of students. The studies analyzed consistently showed the effectiveness of the SSCS model in improving critical thinking skills, problem solving, understanding concepts, and creative thinking at various levels of education from elementary to high school.

This Model is also successfully integrated with various innovative approaches such as the use of technology, interactive multimedia, ethnoscience, and local wisdom values, enriching its implementation and increasing its relevance to the modern learning context. The predominance of quantitative research methods (65%) indicates a focus on empirical measurements of the effectiveness of SSCs models, although there is a need for more research using mixed methods to obtain a more comprehensive understanding.

The distribution of publications in various journals of national and international repute demonstrates the wide recognition of the contribution of the SSCS model in learning innovation. Although the implementation of the SSCS model has shown positive results, further research is still needed on its application in the context of distance learning and blended learning, as well as integration with current digital technologies. With its flexibility and effectiveness, the SSCS model has the potential to become a best practice in constructivist learning that supports the development of 21st century science literacy and skills in Indonesia.

REFERENCES

A. P. Listia, A. Wijayanti, T. Ernawati, and D. Septiani, "Integrasi budaya lokal dalam model pembelajaran Search, Solve, Create and Share (SSCS) untuk meningkatkan literasi sains: Tinjauan pustaka," Jurnal Penelitian Pendidikan Sains, vol. 15, no. 148, pp. 357-374, 2025.

L. Rahmawati, "implementation of SSCS model to improve science literacy of Primary School students during post pandemic Learning," Journal of Basic Education Research, vol. 4, no. 3, pp. 215-228, 2022.

[10] Yusnaeni, Y., Corebima, AD, Susilo, H., & Zubaidah, S. Berpikir kreatif siswa berprestasi rendah yang menjalani pembelajaran mencari, memecahkan, membuat, dan berbagi yang terintegrasi dengan strategi metakognitif. Jurnal Pembelajaran Internasional. 2017;10(2):245-262. https://doi.org/10.12973/iji.2017.10216a

OECD, "PISA results 2022 (Volume I): the state of learning and equality in education," OECD publishing, 2023.

E. L. Pizzini, S. K. Abell, and D. S. Shepardson, "rethinking thinking in the science classroom," science teacher, vol. 55, no. 9, pp. 22-25, 1988.

D. Aringga Rakhmi, Z. Mastur, S. Negeri, and J. Soekarno Hatta Kendal ," learning mathematics constructivism with Search, Solve, Create, and Share (SSCS) model to improve students ' mathematical disposition and understanding of concepts in limit function Class XI science material," Journal of Mathematics Education Research Unnes, vol. 7, no. 2, pp. 117-122, 2018.

B. Milama, E. S. Bahriah, and A. Mahmudah, "Pengaruh model pembelajaran Search, Solve, Create, And Share (SSCS) terhadap kemampuan berpikir kritis siswa," Jurnal Penelitian Dan Pembelajaran IPA, vol. 3, no. 2, pp. 112-122, 2017, doi: 10.30870/jppi.v3i2.2574.

Zulkarnain, H. Zulnaidi, S. Heleni, and M. Syafri, "the effect of SSCS learning model on mathematical problem-solving ability and student self-efficacy," Journal of International Learning, vol. 14, no. 1, pp. 475-488, 2021, doi: 10.29333/IJI.2021.14128 A.

D. Nastiti, S. B. Rahardjo, and E. S. Van Hayus, "the effective use of module-based seeking, solving, creating, and sharing to enhance students' generic science skills," Journal of Physics: Conference Series, vol. 1175, no. 1, p. 012145, 2019, doi: 10.1088/1742-6596/1175/1/012145.

B. Kitchenham and S. Charters, "guidelines for conducting systematic literature reviews in Software Engineering," EBSE Technical Report 2007-001, Joint Report of Keele University and Durham University, 2007.

E. Triandini, S. Jayanatha, A. Indrawan, G. W. Putra, and B. Iswara, "Metode systematic literature review untuk identifikasi platform dan metode pengembangan sistem informasi di Indonesia," Indonesian Journal of Information Systems, vol. 1, no. 2, pp. 63-77, 2019, doi: 10.24002/ijis.v1i2.1916.

Y. Yusnaeni, A. D. Corebima, H. Susilo, and S. Zubaidah, " creative thinking of underachieving students undergoing search, solve, create, and share learning integrated with metacognitive strategies," Journal of International Learning, vol. 10, no. 2, pp. 245-262, 2017, doi: 10.12973/iji.2017.10216 a.

E. Suryawati, Y. Yennita, S. R. Afwa, P. R. Dianti, and S. Syafrinal, "Aksi nyata berbasis model search solve create and share (SSCS) untuk meningkatkan kesadaran keberlanjutan siswa SMP," JPBI (Jurnal Pendidikan Biologi Indonesia), vol. 9, no. 3, pp. 271-281, 2023, doi: 10.22219/jpbi.v9i3.28940.

OECD, "PISA assessment and analysis framework 2018," OECD publishing, 2019.

Efiana, S. Jumini, P. Parmin, and M. Ariyani, "Penerapan model pembelajaran search, solve, create and share (SSCS) untuk meningkatkan kemampuan berpikir kritis," Gravity: Jurnal Ilmiah Penelitian dan Pembelajaran Fisika, vol. 11, no. 1, pp. 16-28, 2025, doi: 10.30870/gravity.v11i1.28776.

R. P. Sari, W. Hidayat, and A. Yuliani, "the influence of SSCS model on the understanding of science concepts and learning outcomes of students in elementary school," International Journal of Elementary Education, vol. 5, no. 2, pp. 178-189, 2021.

K. D. Lestari, "Dampak model pembelajaran SSCS terhadap motivasi dan keterlibatan siswa di kelas IPA," Educational Research Quarterly, vol. 46, no. 3, pp. 55-72, 2023.

A. Nugroho, "utilization of Technology-Integrated SSCS to improve problem-solving skills in Junior High School students," Journal of Science Education Technology, vol. 10, no. 2, pp. 145-160, 2022.

B. Setiawan, "application of integrated SSCS model of local wisdom to improve science literacy of elementary school students," Journal of International Learning, vol. 14, no. 3, pp. 345-362, 2021.

N. Hidayati, "the effectiveness of SSCs integrated with local wisdom on students' critical thinking skills, " Journal of Education Research and Review, vol. 11, no. 4, pp. 267-280, 2023.

D. Kurniawan, "improving learning outcomes through technology integrated SSCS in elementary science learning," research and development of Educational Technology, vol. 70, no. 2, pp. 937-954, 2022.

A. Santoso, "the impact of SSCS model on learning motivation of Junior High School students," Journal of Educational Psychology, vol. 39, no. 3, pp. 416-431, 2021.

B. Prasetyo, "improving critical thinking through SSCs integrated with other pedagogical approaches," Education Sciences: Theory & Practice, vol. 23, no. 1, pp. 45-62, 2023.

D. Yulianti, "implementation of SSCS model to improve science literacy in high school," Journal of Physics Education, vol. 5, no. 2, pp. 176-188, 2020.

F. Wulandari, "the use of SSCS models to improve the learning outcomes of Junior High School students," Journal of Educational Research and Studies, vol. 16, no. 7, pp. 278-289, 2021.

Y. Boari et al., "Analisis efektivitas penerapan model pembelajaran Search, Solve, Create, and Share (SSCS) terhadap kemampuan kognitif siswa," Mudiir, vol. 5, pp. 1-6, 2023.

M. Maimun and B. Bahtiar, "Pengaruh model pembelajaran Search, Solve, Create, And Share (SSCS) berbantuan multimedia interaktif terhadap peningkatan kemampuan berpikir kreatif dan hasil belajar siswa," Jurnal Penelitian Pendidikan IPA, vol. 8, no. 4, pp. 2130-2136, 2022, doi: 10.29303/jppipa.v8i4.1983.

D. Nastiti, S. B. Rahardjo, and E. S. Van Hayus, "Efektivitas modul kimia berbasis search, solve, create, and share (SSCS) untuk meningkatkan keterampilan generik sains," Jurnal Fisika: Conference Series, vol. 1157, no. 4, p. 042018, 2019, doi: 10.1088/1742-6596/1157/4/042018.

H. Hadaming, "Pengaruh model pembelajaran Search, Solve, Create and Share (SSCS) terhadap kemampuan pemecahan masalah matematika berbasis self-efficacy siswa sekolah dasar," Konferensi Internasional Studi Pendidikan Matematika, vol. 611, no. ICoESM, pp. 334-337, 2021.

R. Ananda, "mixed method analysis of SSCs models integrated with technology to improve numerical ability," Journal of Educational Research, vol. 15, no. 3, pp. 234-247, 2022.

L. With Love, A. S. Ato, S. Fayanto, L. O. Nursalam, and L. Sahara, "Penerapan model SSCS (Search, Solve, Create dan Share) untuk meningkatkan hasil belajar pada mata kuliah geometri optik," Jurnal Fisika: Conference Series, vol. 1321, no. 3, p. 032075, 2019, doi: 10.1088/1742-6596/1321/3/032075.

R. Diani, H. Herliantari, I. Irwandani, A. Saregar, and R. Umam, "the Search, Solve, Create, and Share (SSCS) learning Model: its effect on students' creative problem-solving abilities on substance pressure concepts," Journal of research in Physics and its applications (JPFA), vol. 9, no. 1, pp. 65-77, 2019, doi: 10.26740/jpfa.v9n1.p65-77.

M. Yasin et al., "Effect of the SSCs learning model on reflective thinking skills and problem-solving abilities," European Journal of Educational Research, vol. 9, no. 2, pp. 743-752, 2020, doi: 10.12973/eu-jer.9.2.743.

D. Simanullang, A. H. Harahap, and M. Restuati ," development of student worksheets based on Search, Solving, Create and Share (SSCS) learning model to improve critical thinking skills in biology learning of Class III (XII) students of SMA Negeri 1 Pantai Labu," Journal of learning and nuclear Biology, vol. 10, no. 2, pp. 590-606, 2024, doi: 10.36987/jpbn.v10i2.5803.

A. Saroji, U. Rosidin, C. Ertikanto, K. Herlina, and M. Azizah, "SSCs model-based E-worksheets: requiring analysis to stimulate critical thinking skills," Journal of Science Education Research, vol. 9, no. 6, pp. 4172-4178, 2023, doi: 10.29303/jppipa.v9i6.3528.

I. Tiyaswati, Sarwanto, and Sukarmin, "Keterampilan kreatif dan inovasi siswa pada materi pokok hukum Newton menggunakan model pembelajaran SSCS," Jurnal Fisika: Conference Series, vol. 1806, no. 1, p. 012120, 2021, doi: 10.1088/1742-6596/1806/1/012120.

Syamsurizal, Irdawati, Violita, R. S. Afni, and M. Sholichin, "validity and practicality of SSCs-based worksheets on ecology and Environmental Change Materials," journal of Science Education Research, vol. 9, no. 12, pp. 11394-11400, 2023, doi: 10.29303/jppipa.v9i12.4444.

N. My Father, P. Khansila, and P. Nongharnpituk," development of mathematical problem-solving skills on the topic of prisms and tubes using the SSCS model with the think-pair-share technique for eighth graders, " Russian Law Journal, vol. 11, no. 9s, pp. 421-428, 2023, doi: 10.52783/rlj.v11i9s.1645.

A. Srichandee, P. Khansila, and P. Nongharnpituk, "development of mathematics learning achievement in exponents of Grade 7 students using SSCS model with think-pair-share technique," Journal of Science & Science Education, vol. 7, no. 2, pp. 407-417, 2024.

A. R. Handayani, Muhibbuddin, M. Syukri, and Elisa, "Efektivitas model pembelajaran Search, Solve, Create, and Share (SSCS) dalam meningkatkan keterampilan berpikir kritis siswa SMA 9 Banda Aceh,"

Prosiding International Conference on Science, Technology, and Modern Society ke-2 (ICSTMS 2020), vol. 576, pp. 309-312, 2020, doi: 10.2991/assehr.k.210909.069.

F. G. Son et al., "Improving mathematical reasoning: the role of seeking, solving, creating, and sharing Learning," Journal of Education and learning, vol. 18, no. 3, pp. 967-975, 2024, doi: 10.11591/edulearn.v18i3.21399.

L. Zikriana, Fatimah, and B. Nuri, "development of tpack integrated SSCs-based teaching materials in fostering students' scientific attitude, " Journal of Science Education Research, vol. 9, no. 11, pp. 9992-10000, 2023, doi: 10.29303/jppipa.v9i11.5467.

S. Chaiarwut, S. Srikoon, A. Siritaratiwat, and P. Kwangmuang, "improving executive math problem solving through constructivist digital learning platforms: design, development, and evaluation," Open Social Sciences and Humanities, vol. 11, 2025.

H. F. Yunizal, M. Fauziddin, R. Marta, and P. H. Pebriana, "improving problem solving and self-efficacy of mathematics through SSCs model based on local wisdom in elementary school," Journal of Mathematics and Science Education, vol. 5, no. 21, pp. 5250-5258, 2023.

D. A. Widyaningrum et al., "Empowering students' generic science skill through search, solve, create and share (SSCS) learning models with video media in biochemistry," AIP Conference Proceedings, vol. 2330, p. 040010, 2021, doi: 10.1063/5.0043443.

T. C. Amanda and F. Mufit, "The effect of the Search, Solve, Create, and Share (SSCS) learning model on the learning outcomes of students," Journal of Educational Research, vol. 2, no. 3, pp. 144-152, 2024.

J. Boetje, S. O. van Ginkel, M. H. J. Smakman, E. Barendsen, and J. Versendaal, "information problem-solving during digitally authenticated tasks: a thematic analysis of student strategies," Human-Computer Behavior Report, vol. 15, p. 100470, 2024, doi: 10.1016/j.chbr.2024.100470.