The Quality of Education in 50 Countries Reviewed from Sustainable Development Goals: Systematic Literature Review

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ARTICLE INFO

ABSTRACT

Education is an essential aspect of a country. This research aimed to look at countries that implement good quality education and find out what the indicators of the country are in improving the quality of education for sustainable development or see which indicators are used the most in quality education. This research is a systematic literature review. Based on the PRISMA method that has been carried out, a total of 51 journal articles were used in the literature study, and they were obtained from Google Scholar, DOAJ, ScienceDirect, and PubMed. The research results show that indicators of quality education are measured by reliable teaching staff, lifelong education, and completeness of facilities and infrastructure. Of the 51 journal articles examined, 20 journal articles used the indicator of reliable teaching staff as an indicator of education quality, 17 journal articles used lifelong education as an indicator of education quality, and 22 journal articles used indicators of completeness of facilities and infrastructure. These results make completeness of facilities and infrastructure the key to success in creating quality education for sustainable development goals.

INTRODUCTION

The good governance paradigm covers broad principles such as participation, the rule of law, transparency, efficiency, accountability, and transparency so that good governance is considered to be able to facilitate sustainable development goals by implementing public governance so that development goals can achieve public goods and good public service. "public administration is everywhere in the SDGs, and the prominence of public administration in the SDGs is a positive development" (Bouckaert et al., 2016).

Sustainable development goals need effective public administration to achieve sustainable development goals and indicators by 2030. Sustainable development is a government plan regarding global development that will be achieved by 2030. As explained earlier, the SDGs require public administration; this reason is strengthened by the features that exist in public administration, which are more prominent for quality development. Public administration has a sound and independent system that can help achieve development goals. The current public governance system is explicitly mandated to contribute to realizing SDGs through policy instrumentation. Public administration plays a role in the SDGs through poverty alleviation policies, quality education policies, and policies related to gender equality. Public administration has a role in eliminating or stopping specific policies and behaviors related to sustainable development. One concrete form of sustainable development goals is quality education.

The results of research on primary education levels throughout the world through the social progress index conducted by The Social Progress Imperative show that currently, 4 Asian countries occupy the top 20 positions with good quality education, 15 countries from Europe occupy the 20 countries with the best education quality in the world, and one from the Middle East country occupies the position of 20 countries with the best quality in the world. As reported by Deutsche Welle, the ranking of quality education from ASEAN countries is occupied by Singapore in first position with a score of 0.768 and 1.3% of students who fail to complete school, Brunei Darussalam achieved an education index value of 0.692, Malaysia with a UNDP education index of 0.671, Thailand with a score The education index is 0.608, and Indonesia is in 5th position out of 10 ASEAN countries with a quality education level as evidenced by an education index of 0.603 and for the quality education level, Indonesia is in 108th position.

Previous research has shown that the results were obtained in the form of a description of the condition of education in Indonesia, which is relatively low compared to other countries, including lower than in Malaysia; the indicators that can influence the success of quality education are improving the education system by using strategies for implementing quality education that is fair and equitable and providing opportunities for people to learn throughout life regardless of age (Safitri et al., 2022). In contrast to the research entitled SDG 4 "Quality Education," the Cornerstone of the SDGs: Case Studies of Pakistan and Senegal written by Diemer in 2020, results were obtained in the form of key variables from the implementation of education of sustainable development goals (ESD), namely teacher education or teacher awareness in sustainable development with strategies that can be used in the form of teacher education institutions to be able to integrate the education of sustainable development goals (ESD) into teacher training programs, only little tangible progress has been achieved. The research conducted by (Scheerens, 2004) with the title Perspectives on Education Quality, Education Indicators, and Benchmarking regarding the conceptualization of educational quality, which can be a basis for comparison with a series of available indicators, produces results in the form of context indicators (defined at the level of the national education system). Referring to the characteristics of society at large and the structural characteristics of the national education system, input indicators at the system level refer to the financial and human resources invested in education with the criteria of human resources, gender, experience, qualifications, and teacher salaries.

Numerous studies have addressed issues about SDG 4, but none have combined the indicators' results. The research above has revealed various indicators of educational quality. This study aims to consolidate all the findings related to the indicators used in implementing quality education, emphasizing identifying the most significant indicators. As such, the

research aims to determine which indicators are being employed and which critical indicators are most effective in enhancing the quality of education for sustainable development. The SLR method will be used to achieve this objective, as it is considered accurate. Systematically reviewing previous research can identify, evaluate, and synthesize relevant findings to address research problems.

METHODS

This research uses the Systematic Literature Review (SLR) method, or what is also called a literature review, which is carried out systematically (arranged) by collecting data related to the research topic raised, identifying, assessing, evaluating, and interpreting all findings on the topic discussed. Researched and answered all questions from the research (research questions) carried out by the questions in the problem formulation. In this research, a systematic review of the literature related to indicators of quality education for sustainable development purposes was carried out. This research used meta-aggregation, namely looking for answers to RQ1 and RQ2 in the research question. Research questions are well formulated, with the main focus of the research being a Systematic Literature Review, Indicators of Quality Education, and Sustainable Development Goals (Table 1). With the focus of this research, the following question formulations can be given. Researchers use selection criteria in searching for literature that suits their research topic. These criteria consist of inclusion and exclusion criteria, determined based on the RQ1 and RQ2 components (Table 2).

Table 1. Research Questions

Code	Questions
RQ1	What are the indicators of education quality in 50 countries?
RQ2	What indicators are most widely used by each country?

Source: Authors

Table 2. Selection Criteria

Inclusion criteria	Exclusion criteria
1. Literature discussing indicators of quality education for development purposes 2. Free and full-text literature 3. Literature published in the last five years, namely from 2018-2022 4. Literature with research article type	1. Literature that is not free and full-text 2. Literature published other than within the last five years, namely from 2018-2022 3. Literature of types other than research articles

Source: Authors

Based on the PRISMA method that has been carried out, results can be obtained, namely that from a total of 1,321 journal articles identified, 373 were excluded because of data duplication. Another 456 did not meet the inclusion and exclusion criteria. As many as 174 journal articles were excluded because they were not free and were not published within the specified time frame. So, only 51 journals articles were used in the literature study.
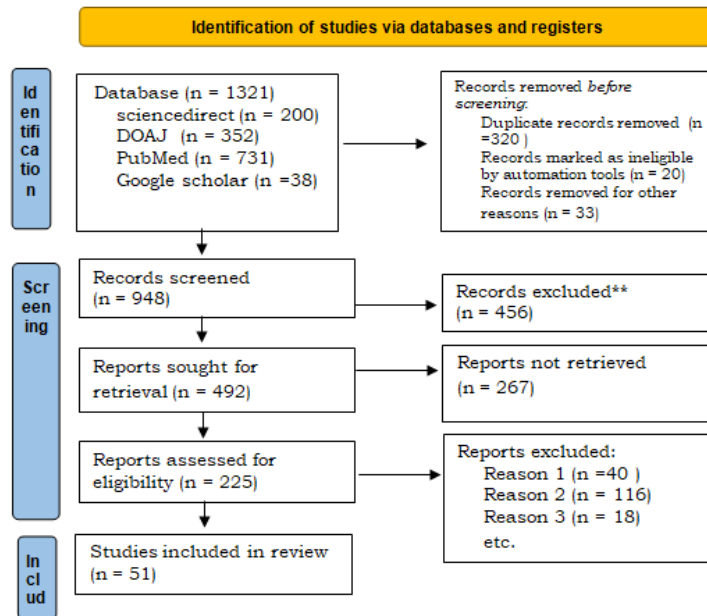
Figure 1. Prisma Flow Diagram
Source: Authors

RESULT AND DISCUSSIONS

Education is a crucial tool for countries to bolster their competitiveness in the global community, particularly in political, economic, legal, and defense realms. The learning process is presently changing (Berthanila et al., 2023). Therefore, quality education can create superior and productive human resources. Humans are the leading force in all areas of national development, and therefore, educational development must be integrated and run in harmony with development in other fields (Falufi & Winarni, 2018).
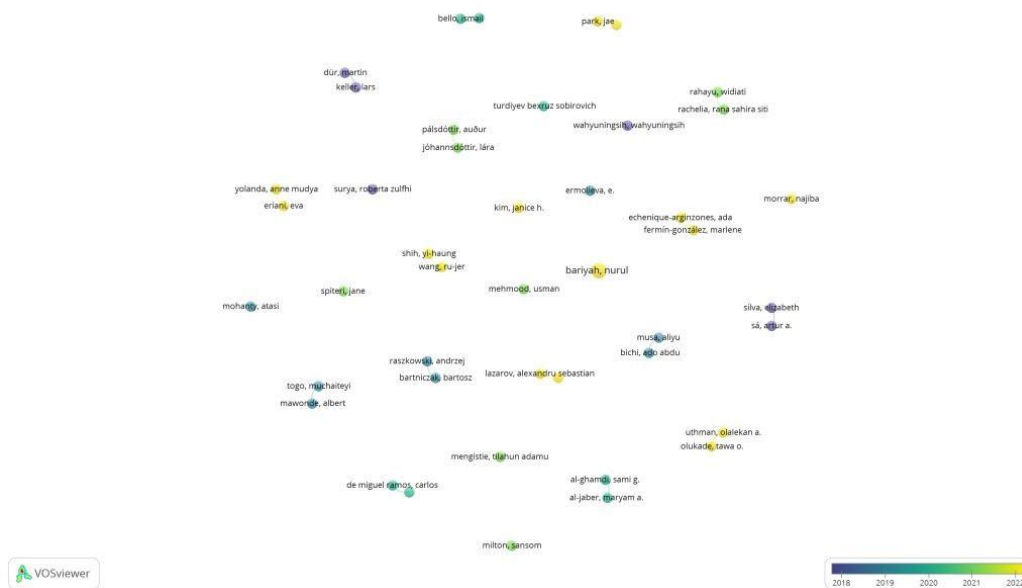

Figure 2. Visual Bibliography of Selected Journals
Source: Authors

This research found that three educational indicators are essential in achieving quality education for sustainable development goals: reliable teaching staff, lifelong

education, and completeness of facilities and infrastructure. Several journals mention that teaching staff can achieve quality education, which must be balanced with training and decent salaries. Meanwhile, in implementing indicators for lifelong education, Indonesia refers to government policy contained in Law Number 20 of 2003 concerning the national education system CHAPTER III article 4, paragraphs 3 and 4. Moreover, for the completeness of facilities and infrastructure, the results of the journal analysis show that the things in question include facilities and infrastructure supporting students with disabilities, WASH programs, access to media supporting learning, buildings and dormitories, school buses, and digital equipment supporting distance learning and classrooms. The results of mapping co-authors from research articles form a pattern, as shown in Figure 2.

The trend of publications that discuss the quality of education related to sustainable development goals can be seen in Figure 3. Research on the theme of quality education for development purposes experienced significant development from 2018 to 2022, and this has positively impacted the number of countries aware of the importance of implementing quality education. Below, we can see ten publications that scholars most cited in this time range. The most citations were selected from the ten authors with the most citations. The most publications were Rodríguez-Abitia et al., with 96 citations, and Dewi et al., with 30 citations. Other authors have varying numbers of citations, but the number of citations is not greater than the ten authors with the most citations in Table 3.

Table 3. Top 10 authors with the most citations

No	Author	Year	Citation
1.	Rodríguez-Abitia et al	2020	96
2.	Mehmood	2021	87
3.	Fekih Zguir et al	2021	80
4.	Raszkowski & Bartniczak	2019	76
5.	Singer-Brodowski et al	2019	76
6.	Spiteri	2021	52
7.	García et al.	2020	42
8.	Odagiri et al	2020	40
9.	Sánchez-Carracedo et al	2021	30
10.	Dewi et al.	2018	30

Search Results and Literature Selection

A literature search was carried out by searching for research articles using keywords from search engines (web), resulting in 1,321 results from search engines with details of ScienceDirect (n= 200), DOAJ (n=352), PubMed (n=731), and Google Scholar (n=38). All articles from each search engine were carried out at the screening stage by removing duplicate items (deleting the same articles) in the Zotero software, which resulted in 320 items being deleted.

Out of 51 journals, 50 countries were obtained, with details of 10 countries belonging to East and South Asia, 3 Eastern Europe and Central Asia countries, 4 America and Caribbean countries, two countries belonging to the Middle East and North Africa, 11 countries belonging to EOCD countries, 4 Sub-Saharan African countries. In line with the quality development goals (SDGs), quality education is target 4 in the quality development goals, where quality education is considered to facilitate the need for equitable education for all children. Out of the 51 journals that have been analyzed according to the Reasch

Question, several results have been obtained that following quality education indicators based on education indicators according to the United Nations Educational Scientific and Cultural Organization (UNESCO) and three dominating indicators can be seen, namely indicators of reliable teaching staff, educational indicators. Throughout life, and indicators of completeness of facilities and infrastructure. A total of 20 journals obtained results in the form of reliable teaching staff as an indicator of quality education for sustainable development goals. Some journals mention that reliable teaching staff must be balanced with teacher training and decent salaries to achieve quality education. This aims to ensure adequately paid teachers provide good service and teaching—seventeen journals with lifelong education indicators. A total of 22 journals extracted resulted in facilities and infrastructure becoming indicators of quality education for sustainable development goals. Several journals specifically provide complete facilities and infrastructure for quality education, namely complete supporting facilities and infrastructure for students with disabilities, running of washing programs such as clean toilets, sanitation, access to clean water for students, media access, housing, and school buildings: proper school buses, digital equipment, and classrooms. In line with the research question (RQ1), the research answered the indicators used by each country to support quality education for sustainable development purposes, as per Nurkholis' theory (2003). There are three indicators for quality development: reliable teaching staff, lifelong education, and completeness of facilities and infrastructure.

As for research question 2 (RQ2), research regarding the most significant proportion in supporting quality education for sustainable development, namely from the results of the literature review that has been carried out, the indicator with the most significant proportion is obtained, namely the Completeness of Facilities and Infrastructure Indicator with completeness including: 1. Disability support facilities and infrastructure; 2. Wash (water, sanitation, and hygiene) in schools; 3. Access to learning support media and complete supporting facilities such as laboratories; 4. School buildings and dormitories; 5. School bus or transportation provided by the school; 6. Digital equipment to support distance learning; and 7.Classroom, chairs, tables, and blackboard.

From these results, the sustainable development goals (SDGs) make quality education a target where quality education can facilitate the need for equitable education for all children. The analysis results also show that the most dominant indicator of quality education as a sustainable development goal is the completeness of facilities and infrastructure. School facilities and infrastructure completeness must be addressed in learning matters. The governance of educational services must guarantee the availability of administrative services, managers' managerial abilities, and facilities and infrastructure (Rusman, 2009, p. 77; Fitriana et al., 2021). Unsurprisingly, complete facilities and infrastructure are the main foundation of education. Quality education must meet adequate facilities and infrastructure, and improving the quality of education must meet standards. Educational infrastructure and structures are some of the leading resources that help the learning process in schools. Conditions of Educational Structure and school infrastructure, as well as the optimization of their management and utilization, significantly influence the effectiveness of educational programs in schools (Matin & Fuada, 2016).

According to Mulyasa (2003:49), facilities are hardware and software that are directly used to help the educational process, especially the teaching and learning process. These include buildings, study rooms, tables, chairs, media, and teaching aids. On the other hand, infrastructure consists of buildings that indirectly help the teaching or education process, such as school yards, parks, and gardens, in addition to the roads that connect them. However, if the place is used explicitly for teaching, such as in the case of demonstrating science, such as a playground or a park, it functions as an educational space. Facilities that run out quickly, such as writing supplies, composition ink, paper, and other items, are divided into different offices.

Solid educational patterns are also visible on globes, map books, blackboards, chairs, tables, and other items. There are two types of infrastructure, one directly used for education, such as classrooms, laboratories, and libraries. Other types of infrastructure, such as canteens, parking lots, and toilets, are not directly used for learning. Facilities and infrastructure are crucial in supporting education, but they must complement each other.

Education cannot occur without qualified teaching staff and cannot be considered successful if it is not accessible to all members of society.

CONCLUSION

Sustainable development goals are a development movement aimed at maintaining continuous improvement in the economic welfare of society. Development is achieved by paying attention to the sustainability of social life by maintaining environmental quality and quality of life to maintain sustainability for the next generation. In connection with the Sustainable Development Goals, the latest paradigm of public administration or good governance is considered appropriate. It can cover the sustainable development movement by making and terminating policies that apply to sustainable development.

Quality education, as one of the quality development targets, forms a movement to advance children's welfare and ensure that all children can receive a decent education. The answer to the first research objective regarding what indicators each country uses to support quality education for sustainable development goals is that there are three indicators for quality development: reliable teaching staff, lifelong education, and completeness of facilities and infrastructure. The 51 research journals were reviewed using a systematic method as an answer to the second research objective, namely to look at the indicators with the most significant proportion, of which all the extracted journals obtained results of 22 journals getting indicators of completeness of facilities and infrastructure as indicators with the most significant proportion of quality education, for sustainable development purposes.

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