

## Problematic Analysis of the National Free School Lunch Policy on Vocational Education

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### Abstract

Free school lunch policies have been shown to improve student health and well-being in many countries. However, the implementation of these policies in low- and middle-income countries faces significant challenges, including logistical issues, budget constraints, and coordination among stakeholders. This study aims to analyze the challenges faced by countries that have already implemented free lunch programs, with a focus on the lessons learned by Indonesia in preparing a similar policy. This research is a literature review, utilizing a Systematic Literature Review (SLR) method in accordance with the PRISMA guidelines. The study focuses on the 10 highest-cited articles from the Scopus database published between 2019 and 2024 that discuss the implementation of free lunch programs in various countries. Document analysis was employed to extract and synthesize key challenges and solutions. Findings show that the main challenges include difficulties with food distribution in remote areas, lack of sustainable budgets, and suboptimal coordination between the government and schools. The implications of the study highlight the importance of strengthening logistics infrastructure and improving coordination across sectors in Indonesia to ensure smooth implementation of the school lunch policy. Future research needs to focus on the long-term impact of the lunch program on academic achievement and innovative logistics models that can be adapted for remote areas in Indonesia.

**Keywords:** Problematic Analysis, Lunch Program, School Feeding, Nutritional Intake, Vocational School.

### 1. Introduction

The government has designed and is ready to implement the National Free Lunch Policy, a strategic initiative to ensure all students across the country have access to nutritious meals during school hours. This policy was born from awareness of the importance of good nutrition for children's physical and mental development [1], [2]. As well as efforts to reduce socioeconomic disparities that still occur in many educational environments [3]. By providing free lunches, the government hopes to support efforts to improve the quality of education and welfare of students, especially those from disadvantaged families [4]. This program is expected to be a significant step in creating a more inclusive learning environment and supporting better academic achievement for all students, without exception.

The National Free Lunch Policy ensures that all students, regardless of socioeconomic status, receive nutritious meals during school hours. This policy is critical, especially for students in vocational schools who often come from economically disadvantaged backgrounds. Many students in vocational schools face various life challenges, including food insecurity, which can affect their concentration in class and their ability to learn effectively [5]. Therefore, the program aims to reduce hunger among students, improve concentration and academic performance, and support students' overall well-being.

By providing free lunches, this policy is expected to reduce the financial burden borne by students' families [6], so that they can focus more on their education and developing their skills [7]. In addition, nutritious food provided in schools is expected to help improve students' physical and mental health, which can contribute to better academic performance [8]. Apart from that, this program is also expected to reduce the rate of student absences due to health reasons or lack of energy to attend class.

However, even though this policy has good intentions, because this program will be implemented on a massive scale for the first time, it is predicted that there will be many obstacles to its implementation. Experience with previous innovative programs shows that large initiatives like this often face various challenges at their implementation. In the context of the National Free Lunch Policy, these challenges include complex logistical issues, such as ensuring the timely distribution of food in good condition to thousands of schools across the country. In addition, there are financial constraints that need to be overcome, including allocating sufficient funds to purchase quality food ingredients, pay labor, and maintain supporting infrastructure. Administrative obstacles also cannot be ignored, where coordination between various related parties—schools, food suppliers, and government agencies—needs to be improved to avoid delays or errors in distribution [9]–[13]. Therefore, although this policy brings great benefits, the success of its implementation is very dependent on the readiness and cooperation of all parties to overcome various obstacles that may arise during the implementation process.

Previous studies show that free school lunch programs have positive impacts such as increasing students' nutritional intake and academic performance. For example, research conducted by [14], found that school lunch programs can improve the nutrition of children and their families. This study revealed that students who receive free lunches are more likely to have healthier eating patterns, which not only benefits them individually but also impacts the overall health of their families. Other research shows that this program influences the eating patterns of children at school, increasing their intake of important nutrients that support their physical and mental development. The study also noted that students who participated in the free lunch program demonstrated improved concentration and academic performance in the classroom. However, behind these benefits, there are significant challenges faced in implementing this program [15]–[17]. Identified several key barriers, including budget constraints that often hinder schools' ability to consistently provide high-quality meals. Logistical issues are also a big challenge, especially in terms of distributing food to various schools with different infrastructures. This includes issues of food storage, transportation, and the availability of adequate kitchen facilities in each school.

Although previous research has explored school lunch programs, literature specifically discussing vocational education is still limited. In fact, the context and challenges faced by vocational schools are different from those of general schools. Vocational schools often serve more diverse student populations with different special needs, including nutritional needs that may be more specific to their vocational program. Additionally, many students in vocational schools come from economically disadvantaged backgrounds, which makes free lunch programs even more critical to their well-being. Therefore, to fill the research gap, more in-depth and specific research is needed to understand how free lunch programs can be implemented effectively in vocational schools, as well as to identify solutions that can overcome the unique challenges faced by these schools.

Therefore, this study aims to conduct a literature review on the challenges of implementing the National Free Lunch Policy in vocational high schools, so as to produce practical recommendations that can be used for the success of the program. This research is urgent to be done because the free lunch policy in schools will soon be implemented by the Indonesian government. In order for it to run well, preparation is needed to avoid any possible problems that may occur. Thus, the results of this study are expected to provide a positive contribution to policy makers, education managers, and other stakeholders in efforts to improve the welfare and educational outcomes of students in vocational high schools.

## 2. Method

This study is library research that uses a Systematic Literature Review (SLR) approach by following the PRISMA (Preferred Reporting Items for Systematic Reviews and Meta-Analyses) guidelines [18], [19]. PRISMA provides a clear and systematic framework for identifying, screening and selecting relevant studies for analysis. The process consists of four main stages of identification, screening, eligibility, and inclusion.

**2.1 Search Strategy using PRISMA**

This study used a Systematic Literature Review (SLR) approach by following the PRISMA (Preferred Reporting Items for Systematic Reviews and Meta-Analyses) guidelines. The search strategy was based on PRISMA to ensure transparent and systematic selection. Articles were identified through the Scopus database with the keywords "Lunch Program" OR "School Feeding" AND "School". The search was limited to articles published in the last five years (2019-2024) to ensure relevance to the current policy context.

**2.2 Databases**

The database used in this study is Scopus, one of the largest and most credible scientific databases that includes indexed journals with cross-disciplinary coverage. Scopus was chosen because it provides access to high-quality, widely cited articles, thus ensuring the selected literature contributes significantly to the research topic. In this search, 10 articles with the highest citations were selected for in-depth analysis.

**2.3 Inclusion and Exclusion Criteria**

To ensure that the articles analyzed in this study have high relevance and contribute significantly to the understanding of the implementation of the Free Lunch Policy in Vocational High Schools, strict inclusion and exclusion criteria were used. These criteria aim to filter out relevant and quality articles, as well as avoid articles that do not fit the focus of the research. The selected articles had to meet certain predetermined criteria based on the relevance of the topic, the quality of the research, and the empirical contribution. Articles that did not meet the exclusion criteria were eliminated from the further analysis process. The inclusion and exclusion criteria applied in this study can be seen in [Table 1](#).

[Table 1](#). Inclusion and Exclusion Criteria

No.	Criteria	Inclusion	Exclusion
1	Document Type	Journal articles containing empirical data related to lunch policies in vocational schools	Review articles, book chapters, conference proceedings, or those that do not contain empirical data.
2	Language	English	Articles written in languages other than English
3	Publication Year	Articles published within 2019-2023	Articles published before 2019
4	Database	Scopus	Databases other than Scopus
5	Relevance	Articles that explicitly discuss lunch policies in vocational schools	Articles that discuss the lunch policy in other irrelevant contexts
6	Citation Count	10 highest-cited articles on Scopus	Articles with low citations or not among the 10 highest-cited articles

**2.4 Systematic Review Process**

To ensure transparency and accuracy in the literature selection process, this study followed a systematic review process based on PRISMA (Preferred Reporting Items for Systematic Reviews and Meta-Analyses) guidelines [20], [21]. This process is designed to ensure that only relevant articles that meet strict criteria are included in the final analysis [22]. Each stage was conducted sequentially to ensure that the selected articles truly reflected the context of the implementation of the Free Lunch Policy at the Vocational High School. This process includes four main stages; more details can be seen in [Figure 1](#).

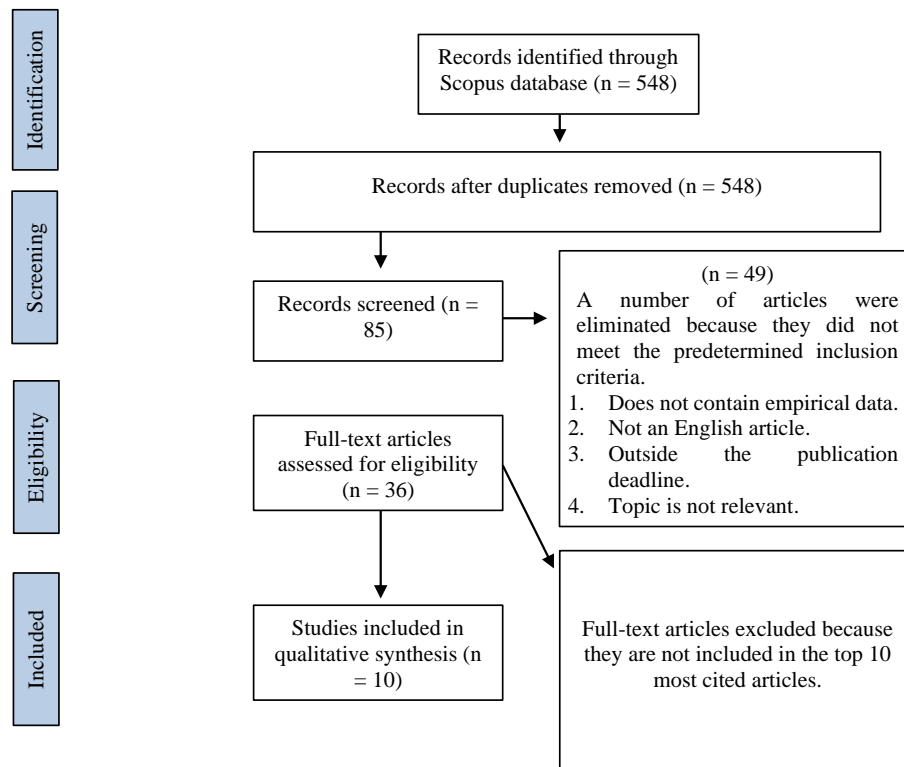


Figure 1. The PRISMA Flow Diagram

Figure 1 illustrates the systematic process flow of this literature review, adhering to the PRISMA guidelines. The process began with the identification of 548 articles from the Scopus database using specific search terms related to free school lunch policies. In the initial step, duplicates were removed, but in this case, no duplicates were found, leaving the number of articles at 548. In the next step, a screening process was conducted based on the title and abstract. This step aimed to ensure that the articles were relevant to the topic and met the basic inclusion criteria, which included being published between 2019 and 2024, written in English, and containing empirical data. After this stage, 463 articles were excluded, resulting in 85 articles that met the initial criteria for further evaluation. At the second screening stage, full-text screening was conducted to ensure that the articles provided substantial empirical evidence on the challenges and solutions related to the implementation of free lunch programs. In this step, 49 articles were excluded for several reasons: they did not provide empirical data, were not written in English, were published outside the specified time range, or the focus was not directly relevant to free lunch policies in vocational schools. These exclusions were necessary to maintain the relevance and quality of the data sources. Finally, qualitative eligibility was applied, focusing on the 36 remaining articles. This stage evaluated the articles based on their citation counts, ensuring that only the most influential and highly cited research in the field was included. Articles that did not rank among the top 10 highest-cited papers were excluded, as the study aims to synthesize findings from the most impactful research. Consequently, 10 articles were selected for inclusion in the qualitative synthesis, allowing for a focused analysis of the key challenges and solutions in implementing free lunch policies in vocational schools. This structured reduction process was undertaken to ensure the study included only the most relevant, high-quality, and influential articles, thereby providing a strong evidence base for analyzing the challenges and best practices in free school lunch policy implementation.

## 2.5 Data Abstraction and Analysis

Once the inclusion process was complete, data from the selected articles were systematically extracted. Each article was analyzed using a thematic approach to identify key themes such as logistical challenges, budget, and stakeholder engagement. This analysis aimed to provide in-depth insights into the challenges of implementing the free lunch policy as well as the proposed solutions. The findings

were then synthesized to provide a comprehensive picture of the policy and how improvements can be made to increase its effectiveness in Vocational High Schools as shown in [Table 2](#).

**Table 2.** Summary of Analyzed Articles

Studies	Year	Location	Cite	Methodology	Finding
[23]	2020	Haiti, Nepal, Sierra Leone, Syria, Tajikistan, Bangladesh, Djibouti, Kenya, Nicaragua, Philippines, Ukraine, Brazil, Iran, Mexico, Thailand	149	Qualitative	Challenges related to food distribution and poor sanitation exacerbate difficulties in providing school lunches.
[24]	2020	United States	100	Qualitative	School closures hamper school meal distribution but lead to innovations in food provision during the pandemic.
[25]	2021	Africa	98	Qualitative	School meal programs in Africa face logistical and budgetary challenges that affect their effectiveness and sustainability.
[26]	2020	India	72	Qualitative	School closures result in major disruptions to the food security of children who rely heavily on school lunch programs.
[27]	2020	United States	52	Quantitative	Nutritional quality improved after the implementation of the midday meal policy, but challenges remain on accessibility for low-income families.
[28]	2021	United States	43	Qualitative	Challenges in cross-sector coordination to ensure proper food distribution during the pandemic, especially for children.
[29]	2022	Sweden	41	Quantitative	School lunch reforms have long-term positive impacts but require strong infrastructure and policy support.
[16]	2020	Low and middle-income countries	40	Qualitative	School closures increase the risk of malnutrition for children in low-income countries who rely on lunch programs.
[30]	2020	United States	39	Quantitative	Stricter nutrition standards improve the quality of school meals, but implementation faces challenges in schools with limited resources.
[31]	2020	United States	34	Qualitative	The universal lunch program has shown improved academic results, but challenges remain in providing meals to underprivileged areas.

### 3. Result and Discussion

#### 3.1 Descriptive Analysis of the Selected Articles

From the literature search results in the Scopus database, a total of 548 articles were identified as potential for analysis. After the screening process and removal of duplicates, 85 articles were selected for further examination. However, after full-text evaluation, only the 10 articles with the highest citations were selected for inclusion in the final analysis. These articles were published between 2019 and 2024, covering various contexts of free lunch policy implementation in Vocational High Schools.

Table 2 provides details of the 10 articles included in the qualitative synthesis. The articles vary in methodology, including qualitative, quantitative, and mixed methods approaches. Most of the articles focus on the challenges of policy implementation in vocational schools in different regions, especially in developing countries.

### 3.2 *Thematic Findings*

From the analysis of the 10 selected articles, some key challenges in the implementation of school lunch policies in the context of middle- and low-income countries can be identified. These challenges are grouped into three broad themes. First, Logistical and Distribution Challenges Almost all articles highlighted the logistical and distribution issues of school meals, especially during the COVID-19 pandemic, when school closures and lockdowns globally hampered children's access to school meals. These challenges are more prominent in low-middle-income countries, as mentioned in the articles [16], [23], [32], [33], where limited infrastructure and hindered food distribution exacerbates the problem of undernutrition in children.

The second challenge is Budget and Resource limitations. Budget limitations emerged as a significant challenge in several studies, especially in developing countries. For example, articles [34]–[36] Mentioned that lunch programs often lack adequate funding, thus affecting their effectiveness. In developed countries, such as the United States, improving nutritional standards in school lunch programs, as discussed in articles [37]–[39] Facing implementation challenges in schools with limited resources.

The third challenge is Stakeholder Coordination and Inconsistent Policies. Many articles discuss the importance of cross-sector coordination between government, schools, and communities in ensuring the smooth implementation of lunch programs. In countries such as the United States, policies such as the studies conducted by Boklis-Berer et al. [40], Mqgibandaba et al [41], Kaur [42] They have brought improvements in nutritional quality, but coordination and inconsistent support from various parties are still challenges. Articles have brought improvements in nutritional quality, but coordination and inconsistent support from various parties is still a challenge. Articles Chan et al. [43], Modjadji [44], and Mostert [45] highlight how cross-sector collaboration is essential, but uneven in some areas. They have brought improvements in nutritional quality, but coordination and inconsistent support from various parties are still challenges. Articles Chan et al. [43], Modjadji [44], Mostert [45] Highlight how cross-sector collaboration is essential, but uneven in some areas.

### 3.3 *Synthesis of Findings*

A synthesis of findings from the analyzed articles shows that the main challenges in implementing global school lunch policies include logistical, budgetary, and coordination aspects. The COVID-19 pandemic exacerbated these challenges, especially in low-middle-income countries, where many children rely heavily on school lunch programs as their main source of nutrition. Widespread school closures exacerbate the risk of undernutrition, especially in countries that have a high reliance on school lunch programs, as outlined in articles [46]–[48]. The school lunch policy has not yet been implemented nationally in Indonesia but will be implemented in 2025. Logistics and distribution challenges also potentially occur in Indonesia due to the country's vast and diverse geography. Indonesia has more than 17,000 islands, with many rural and remote areas that are difficult to reach. Limited transportation infrastructure in these areas causes difficulties in distributing food to schools with difficult access. This condition is exacerbated in the event of a pandemic that results in access closures, such as in the past COVID-19 pandemic when mobility is restricted, and distribution channels become more irregular. This is similar to what is discussed in [49]–[51], where difficult geographical conditions are a major obstacle to maintaining a smooth school lunch program.

In addition to logistical challenges, budget constraints are also a significant issue in the implementation of midday meal programs in many countries, including Indonesia. Although supplementary feeding programs in some countries have updated nutritional standards to ensure that the food provided is healthier and meets children's nutritional needs, funding challenges remain a major obstacle. As discussed in articles [52]–[54], although nutrition standards have been improved, difficulties in ensuring sufficient budget allocation for each school have affected the implementation of this program. Many schools experience constraints in providing quality food due to limited funding,

especially in remote and less developed areas where logistics and distribution costs are higher. For example, many schools in remote areas of Papua or Kalimantan face problems in ensuring the continuity of the supplementary food program. With long distances from distribution centers and difficult access, such as only being reachable by boat or plane, the cost of shipping food items is very high.

In addition to budget issues, coordination among stakeholders is also a major challenge in ensuring the smooth implementation of the supplementary food program in Indonesia. The program involves many parties, ranging from the central government, local governments, and schools to local communities. The unclear responsibilities and lack of effective communication between these various parties often cause food distribution to be hampered. As outlined in the articles [55]–[57], the lack of coordination across sectors results in food programs not running well, especially in times of crisis such as a pandemic. The central government is often responsible for budget allocation and policy, while local governments are responsible for implementation and distribution. However, the lack of synergy between the central and local governments often hampers the program. Bureaucratic red tape also exacerbates the situation. In many cases, food distribution is delayed due to lengthy procurement processes or protracted budget approvals. As a result, schools often have to wait months before receiving the necessary foodstuffs, while children who are supposed to benefit from the program have to wait without certainty. This situation shows that although the supplementary food program aims to improve students' health and well-being.

### **3.4 Comparison of Findings with Existing Literature**

The findings from the articles analyzed in this review are in line with existing literature on the challenges of implementing school lunch policies, particularly in low-middle-income countries. Logistical challenges, budget constraints, and coordination between stakeholders are the main issues repeatedly identified, both in the international context and in Indonesia. Existing literature shows that food distribution in schools in developing countries is highly influenced by inadequate infrastructure and poorly integrated logistics systems, as described in articles [58]–[60]. This condition is also very relevant in Indonesia, where many remote areas that are difficult to reach affect the smooth distribution of food in schools.

In Indonesia, logistical challenges related to food distribution are greatly influenced by diverse geographical conditions, with many schools located in remote and difficult-to-access areas. Previous research on school meal distribution in Indonesia has also shown that hard-to-reach areas, such as inland Kalimantan, Papua, and remote islands, face constraints similar to those faced by other low-middle-income countries. International studies on school meal distribution, especially in crisis conditions such as the COVID-19 pandemic, note that infrastructure limitations and lack of accessibility exacerbate malnutrition among children who rely heavily on school meals. This is also emphasized in articles [61]–[63], which highlights how global school closures during the pandemic exacerbated food distribution issues in countries with inadequate infrastructure, including Indonesia.

Budget constraints are also a consistent challenge in Indonesia and the global literature. Articles [64]–[66], highlight how, despite updated nutrition standards, schools in the United States face difficulties in implementing these standards equally due to budget constraints. This is also reflected in the Indonesian context, where budget allocations for supplementary feeding programs are often insufficient, especially in remote areas that require higher distribution costs. Previous research in Indonesia shows that local governments often struggle to sustainably fund school lunch programs, especially when logistics costs for remote areas are more expensive compared to urban areas.

Previous literature has also highlighted that in developing countries, school lunch programs are often hampered by a lack of coordination between stakeholders, both between central and local governments and between schools and local communities. Articles [67]–[69] highlight that cross-sector coordination is crucial for successful food distribution during a pandemic, yet challenges in collaboration often keep food programs from running smoothly. This is relevant to the Indonesian context, where supplementary feeding programs are often constrained by a lack of synergy between the central government, which is responsible for policy and budget, and local governments, which are responsible for implementation. In Indonesia, bureaucratic red tape and lack of communication between different parties cause delays in food distribution, as identified in the literature on education and nutrition policy.

Overall, the findings are consistent with existing literature on the challenges of implementing school lunch programs, especially in low-middle-income countries. Indonesia faces similar challenges in terms of logistics, budget, and coordination but on a larger scale due to its unique geography and diverse infrastructure. To overcome these challenges, Indonesia needs to learn from the experiences of other countries that have successfully improved cross-sector coordination and ensured more stable funding for school lunch programs while considering innovative solutions to the unique logistical challenges in rural and remote areas.

The results of this study provide important contributions to the development of free lunch policies in Indonesia, especially in vocational schools with special needs. First, by analyzing the logistical, budgetary, and coordination challenges between stakeholders from different countries, this study provides an in-depth understanding of the obstacles that can be anticipated and overcome before implementing the policy in Indonesia. Second, the findings on innovative strategies in overcoming distribution barriers in countries with challenging geographical conditions provide valuable lessons that are relevant to Indonesia, which has many remote areas. Third, this analysis enriches the limited literature on the implementation of lunch policies in vocational schools, which usually have students from disadvantaged economic backgrounds. The practical implications of this study are to provide an empirical basis for policymakers in Indonesia to design effective policies that take into account the special needs of vocational schools and the geographical characteristics of Indonesia. This contribution also opens up opportunities for further research on the adaptation of lunch policy models that are appropriate to the Indonesian context, which can facilitate future policy planning and evaluation.

#### 4. Conclusion

The findings of this study indicate that the main challenges in implementing free school lunch policies in various countries are logistical constraints, budget constraints, and coordination between stakeholders, these findings are relevant to consider in implementing national free lunches in Indonesia. Indonesia can learn from the experiences of other countries that have implemented it, especially in terms of strengthening logistics infrastructure and ensuring sustainable budget allocation. In Indonesia, with different areas and regional conditions, the implementation of lunch policies in remote areas requires special attention to coordination between the central government, regions, and local communities, because it will need to be adjusted to the capabilities of the area. The implications of this study emphasize the importance of improving logistics distribution and funding for the policy to be effective. In the future, further research should focus on the long-term impact of lunch programs on student academic achievement and logistics strategies that can overcome geographical barriers in Indonesia.

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