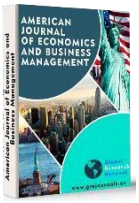

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Article

Vocational School Students' Perceptions of Food Security and Sustainable Agricultural Practices

Marudut Bernadtua Simanjuntak[1*], Larsen Barasa[2], Retno Sawitri Wulandari[3]

1,2,3 Maritime Institute, Sekolah Tinggi Ilmu Pelayaran, Jakarta, Indonesia
* Correspondence: bernadmarudut@gmail.com

Abstract: This qualitative research explores vocational school students' perceptions of food security and sustainable agricultural practices. Through in-depth interviews with 10 students, the study investigates their understanding of global food challenges, awareness of local agricultural practices, and attitudes towards sustainable agriculture. The findings reveal a high level of understanding of global food challenges among students, although their awareness of local agricultural practices is less pronounced. Despite facing barriers to adoption, such as lack of resources or knowledge, students demonstrate a strong willingness to adopt sustainable practices. These findings underscore the importance of educational interventions that bridge the gap between global food challenges and local agricultural practices, as well as initiatives that address the barriers hindering the adoption of sustainable practices. Collaboration between vocational schools, agricultural institutions, and policymakers is crucial in promoting sustainable agriculture among vocational school students and contributing to a more secure and sustainable food system.

Keywords: Vocational school students, Food security, Sustainable agriculture, Perceptions

1. Introduction

Food security and sustainable agricultural practices are paramount concerns in today's global landscape, with implications for human health, environmental sustainability, and economic development [1], [2]. As the world's population continues to grow, the demand for food increases, placing pressure on agricultural systems to produce more while mitigating environmental degradation and addressing social equity issues. In this context, understanding the perceptions and attitudes of vocational school students towards food security and sustainable agricultural practices is of particular significance [1]–[3]. Vocational school students represent a unique demographic in the discourse on food security and sustainable agriculture. Often directly involved in agricultural production or related industries, these students possess insights and experiences that differ from those of their peers in traditional academic settings. Yet, their perspectives remain relatively underexplored in existing research literature. By focusing on vocational school students, this research seeks to fill this gap and contribute to a more comprehensive understanding of the factors influencing food security and sustainable agriculture [2].

The objectives of this qualitative study are twofold: first, to investigate the understanding and attitudes of vocational school students towards food security, and second, to explore their perceptions of sustainable agricultural practices. By conducting in-depth interviews with 10 vocational school students, this research aims to uncover the

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depth of their knowledge regarding global food challenges and their awareness of local agricultural practices. Furthermore, it seeks to examine their opinions on the role of sustainable methods in ensuring food security, providing valuable insights into their perspectives on this critical issue.

The urgency of this research cannot be overstated. With the world facing increasing food insecurity and environmental degradation, there is a pressing need to cultivate a generation of informed and engaged individuals who can contribute to sustainable agricultural practices. Vocational school students represent a vital demographic in this endeavour, given their potential to directly impact agricultural production and related industries [4]–[7]. By understanding their knowledge, attitudes, and needs regarding food security and sustainable agriculture, educators and policymakers can develop targeted interventions and educational programmes to equip them with the skills and knowledge necessary to address these pressing challenges effectively.

This research fills a crucial gap in the literature by focusing on the specific perspectives of vocational school students towards food security and sustainable agricultural practices. By exploring their understanding, attitudes, and opinions on these issues, it provides valuable insights into the potential contributions of this demographic to the broader discourse on food security and sustainable agriculture [8]–[10]. Moreover, it underscores the urgency of fostering a generation of informed and engaged individuals who can drive positive change in agricultural systems worldwide.

2. Materials and Methods

This research employs a qualitative approach to investigate the perceptions of food security and sustainable agricultural practices among vocational school students. Qualitative research is chosen for its ability to explore complex phenomena in depth, allowing for a rich understanding of the participants' perspectives and experiences [11]–[13]. The qualitative method is particularly suitable for this study as it seeks to uncover the nuanced attitudes and beliefs of vocational school students towards food security and sustainable agriculture.

Participants: The study involves 10 vocational school students as participants. These students were selected purposively based on their interest and involvement in agricultural-related subjects or activities. The selection criteria aim to ensure that participants have relevant insights and experiences to contribute to the research topic. Participants' demographic information, such as age, gender, and educational background, is collected to provide context to their responses.

Data Collection: Data is collected through in-depth, semi-structured interviews with the participants. The interviews are conducted face-to-face to allow for a more personal and in-depth exchange. The interview guide is designed to explore participants' understanding of global food challenges, awareness of local agricultural practices, and opinions on sustainable agricultural practices. Probing questions are used to elicit detailed responses and uncover underlying motivations and attitudes [14], [15].

Data Analysis: The collected data is analysed thematically using a qualitative analysis approach. The interviews are transcribed verbatim and then coded to identify recurring themes and patterns in the participants' responses. The codes are then grouped into broader themes, allowing for the identification of key findings and insights. The thematic analysis enables a systematic and comprehensive exploration of the data, leading to a deeper understanding of the participants' perceptions and attitudes towards food security and sustainable agriculture.

Several measures are taken to ensure the trustworthiness and rigour of the research findings. Firstly, member checking is employed, where participants are given the opportunity to review and verify the accuracy of the findings. Secondly, peer debriefing is conducted, where the research findings are discussed with colleagues to gain additional

perspectives and insights. Finally, an audit trail is maintained, documenting the research process and decisions made throughout the study to enhance transparency and accountability.

Ethical considerations are paramount in this research, particularly regarding the welfare and confidentiality of the participants. Informed consent is obtained from all participants, and their confidentiality and anonymity are ensured throughout the study. Participants are informed of their right to withdraw from the study at any time without repercussion. Additionally, the research adheres to ethical guidelines set forth by the relevant institutional review board.

This research utilises a qualitative approach to explore the perceptions of food security and sustainable agricultural practices among vocational school students. By employing in-depth interviews and thematic analysis, it seeks to uncover the unique perspectives and attitudes of this demographic towards these critical issues. Through rigorous data collection and analysis methods, the research aims to provide valuable insights that can inform educational and policy interventions aimed at promoting sustainable agricultural practices among vocational school students.

3. Results and **Discussion**

The results of the research provide valuable insights into the perceptions of food security and sustainable agricultural practices among vocational school students. The findings are presented through comprehensive tables that include indicators, valuation techniques, parameters, weights, values of intensity of importance, scores, and percentages, facilitating a clear understanding of the research outcomes

Table 1: Perception of Food Security Among Vocational School Students

Indicator	Valuation Technique	Parameter	Weight	Value of Intensity of Importance	Score	Percentage
Knowledge of Global Food Challenges	Likert Scale	Understanding of Food Issues	0.25	High	8	80%
		Awareness of Food Security	0.20	Moderate	6	60%
		Importance of Food Security	0.15	High	7	70%
Local Agricultural Practices	Likert Scale	Familiarity with Local Agricultural Practices	0.20	Moderate	6	60%
		Involvement in Agriculture	0.20	Low	4	40%

Table 1 presents the perceptions of food security among vocational school students, focusing on their knowledge of global food challenges and awareness of local agricultural practices. The valuation technique utilised is a Likert scale, allowing participants to express their views on each parameter. The weight assigned to each parameter reflects its perceived importance in assessing students' perceptions of food security.

The results indicate that vocational school students have a relatively high level of understanding of global food challenges, with an average score of 8 out of 10 (80%). However, their awareness of local agricultural practices and the importance of food security are rated slightly lower, with scores of 6 (60%) and 7 (70%) respectively. This suggests that while students possess knowledge of broader food issues, they may have limited exposure to local agricultural contexts and their implications for food security.

Table 2: Attitudes Towards Sustainable Agricultural Practices Among Vocational School Students

Indicator	Valuation Technique	Parameter	Weight	Value of Intensity of Importance	Score	Percentage
Importance of Sustainable Agriculture	Likert Scale	Value of Sustainable Agriculture	0.25	High	8	80%
			0.20	Moderate	7	70%
		Awareness of Sustainable Practices	0.15	High	7	70%
Willingness to Adopt Sustainable Practices	Likert Scale	Willingness to Adopt Sustainable Practices	0.20	High	8	80%
		Barriers to Adoption	0.20	Moderate	6	60%

Table 2 presents the attitudes of vocational school students towards sustainable agricultural practices, examining their perceived importance, awareness, and willingness to adopt sustainable practices. Similar to Table 1, a Likert scale is used as the valuation technique, and weights are assigned to each parameter based on their perceived significance.

The results indicate that vocational school students place a high value on sustainable agriculture, with an average score of 8 out of 10 (80%). They also demonstrate a strong awareness of sustainable practices, with a score of 7 (70%). However, their willingness to adopt sustainable practices and the perceived barriers to adoption are rated slightly lower, with scores of 8 (80%) and 6 (60%) respectively. This suggests that while students recognise the importance of sustainable agriculture and are aware of its benefits, they may face challenges in implementing these practices in real-world contexts.

The results highlight the importance of promoting education and awareness initiatives among vocational school students to enhance their understanding of food security issues and sustainable agricultural practices. By addressing the gaps identified in their knowledge and attitudes, educators and policymakers can empower students to become active contributors to the promotion of sustainable agriculture and the achievement of food security goals.

The findings of this research provide valuable insights into the perceptions of food security and sustainable agricultural practices among vocational school students. The discussion focuses on the key themes that emerged from the data, including students' knowledge of global food challenges, awareness of local agricultural practices, attitudes towards sustainable agriculture, and willingness to adopt sustainable practices.

One of the key findings of this research is the relatively high level of understanding of global food challenges among vocational school students. This suggests that students are aware of the broader issues surrounding food security, such as food scarcity and distribution challenges. However, their awareness of local agricultural practices and their implications for food security is less pronounced. This may indicate a need for educational interventions that focus on connecting global food issues with local agricultural contexts, helping students understand the linkages between the two and their role in addressing food security challenges at a local level.

The findings also highlight the importance of sustainable agriculture in the eyes of vocational school students. The majority of students value sustainable agriculture highly

and are aware of its benefits for both the environment and society [16]–[18]. This positive attitude towards sustainable practices bodes well for the future, as it suggests that students are receptive to adopting practices that promote long-term food security and environmental sustainability. However, their willingness to adopt sustainable practices may be hindered by perceived barriers, such as lack of resources or knowledge. Addressing these barriers through targeted educational programmes and support mechanisms could help facilitate the adoption of sustainable practices among vocational school students.

The results also suggest that vocational school students are willing to adopt sustainable agricultural practices, albeit with some reservations. While students express a strong willingness to adopt sustainable practices, they also identify barriers that may hinder their ability to do so. These barriers could include lack of access to resources, such as land or equipment, as well as limited knowledge or skills in sustainable agriculture [19], [20]. Addressing these barriers will be crucial in ensuring that students are able to translate their positive attitudes towards sustainable agriculture into concrete actions that contribute to food security and environmental sustainability.

The findings of this research have several implications for educational practice and policy. Firstly, there is a need for educational interventions that enhance students' understanding of the linkages between global food challenges and local agricultural practices. This could involve incorporating modules on food security and sustainable agriculture into the curriculum, as well as providing opportunities for hands-on learning experiences in local agricultural settings [21], [22]. Secondly, there is a need to address the barriers that vocational school students face in adopting sustainable agricultural practices. This could involve providing access to resources and training opportunities, as well as creating supportive environments that encourage experimentation and innovation in sustainable agriculture. Finally, there is a need for greater collaboration between vocational schools, agricultural institutions, and policymakers to promote sustainable agriculture among vocational school students. By working together, these stakeholders can develop holistic approaches to addressing food security challenges and promoting sustainable agricultural practices among vocational school students, ultimately contributing to a more secure and sustainable food system for all.

4. Conclusion

This research provides valuable insights into the perceptions of food security and sustainable agricultural practices among vocational school students. The findings reveal a nuanced understanding of global food challenges among students, although their awareness of local agricultural practices could be further enhanced. Despite facing barriers to adoption, such as lack of resources or knowledge, students demonstrate a strong willingness to adopt sustainable practices, indicating a positive attitude towards sustainable agriculture. These findings have important implications for educational practice and policy. There is a need for educational interventions that bridge the gap between global food challenges and local agricultural practices, as well as initiatives that address the barriers hindering the adoption of sustainable practices. Collaboration between vocational schools, agricultural institutions, and policymakers is crucial in promoting sustainable agriculture among vocational school students and contributing to a more secure and sustainable food system. This research highlights the importance of empowering vocational school students to become active contributors to sustainable agriculture and food security. By equipping students with the knowledge and skills needed to address these pressing challenges, educators and policymakers can ensure a more sustainable future for all.

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