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Education on Halal and Thayyib (Wholesome) Food Intake within the MBG (Makan Bergizi Gratis) Program for Students at SMA Sunda Kelapa, Jakarta

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Abstract

The Free Nutritious Meals (Makan Bergizi Gratis, MBG) program provides an opportunity to combine school meal provision with education on informed, responsible food consumption. This community outreach activity aimed to introduce halal and thayyib principles, balanced nutrition, and food safety to students at SMA Sunda Kelapa, Jakarta. A school-based educational approach was implemented through institutional coordination, identification of learning needs, preparation of instructional materials, and delivery of educational sessions. Materials included presentations, food label examples, meal illustrations, and case-analysis worksheets. Instruction addressed permissible ingredients, halal certification verification, wholesome food characteristics, nutrient functions, balanced meal composition, hand hygiene, contamination prevention, and reporting potentially unsafe food. The lecturer team concluded the activity with internal reflection, documentation, and implementation review. The documented implementation established an integrated instructional framework connecting religious food requirements with nutritional adequacy and safe consumption practices. The activity also clarified that halal status alone does not establish nutritional balance or food safety, and that students' responsibilities differ from those of food providers and regulators. No participant-level assessment results or quantified behavioral outcomes were available; consequently, effectiveness cannot be inferred. Future implementation should incorporate structured assessments, student feedback, and follow-up evaluation to examine learning outcomes and support sustained school food literacy.

Keywords: *Balanced Nutrition, Food Safety, Free Nutritious Meals, Halal and Thayyib, School-Based Education.*

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INTRODUCTION

School-based nutrition programs have become an important component of educational and public health strategies aimed at improving students' nutritional well-being, learning conditions, and capacity to develop healthy dietary practices. Indonesia's Free Nutritious Meals Program (*Makan Bergizi Gratis*, MBG) represents an institutional effort to strengthen food accessibility among school-aged populations while supporting students' participation in educational activities. Evidence from an Indonesian quasi-experimental study indicates that the provision of free nutritious meals can improve concentration among elementary school students, demonstrating the potential educational benefits of structured school feeding interventions (Arifin et al., 2025). The effectiveness of such programs, however, cannot be determined solely by food distribution because students' willingness to consume meals and their understanding of nutritional quality influence the practical value of food assistance. Research examining MBG menu acceptability in North Jakarta identified differences in food acceptance across educational levels and highlighted the relevance of nutritional knowledge and eating habits among junior high school students (Srimiati et al., 2026). Religious considerations also constitute an important dimension of dietary inclusion, particularly where students' food choices must accommodate Islamic requirements alongside nutritional adequacy and equitable food access (Keleher et al., 2024). The integration of halal and *thayyib* principles into MBG-related education therefore requires attention to religious permissibility, nutritional quality, hygiene, and food safety as complementary dimensions of responsible food consumption (Bayhaqi et al., 2026).

Contemporary research on adolescent food education has increasingly emphasized the relationship between nutritional knowledge, dietary attitudes, and the educational environments that influence everyday consumption practices. Quasi-experimental research involving school-going adolescents has examined nutrition education as an intervention addressing nutritional knowledge, attitudes, and diet quality, providing an empirical basis for evaluating educational approaches beyond the delivery of information alone (Raut et al., 2024). Evidence synthesized through an umbrella review further indicates that school-based healthy eating interventions are more promising when educational activities are supported by environmental improvements and broader participation from families or school communities (Samad et al., 2024). Religious and culturally responsive approaches extend this discussion by recognizing that food-related decisions may be influenced by beliefs concerning permissible consumption, personal responsibility, and healthy living. The *halalan toyyiban* concept has consequently been proposed as a faith-based educational framework capable of connecting Islamic dietary values with broader efforts to improve nutritional practices among young people (Zakaria et al., 2024). Indonesian experimental research, nevertheless, demonstrates that education concerning halal and *tayyib* food selection can improve participants' knowledge without necessarily producing corresponding improvements in attitudes, indicating that cognitive understanding and behavioral orientation should be distinguished when evaluating educational outcomes (Umami et al., 2023).

Despite these developments, existing scholarship has not adequately established how halal literacy, balanced nutrition, and food safety education can be operationally integrated within MBG-related learning activities for senior high school students. Studies examining the educational benefits of MBG have primarily investigated concentration among elementary school children, leaving the application of these findings to adolescent food literacy and informed dietary decisions insufficiently addressed (Arifin et al., 2025). Community-based educational initiatives integrating halal principles with food safety literacy have provided practical insights into religiously informed learning, although their implementation among vocational Islamic boarding school students differs from the institutional and demographic characteristics of general senior high schools (Mahmudah et al., 2025). Research on halal and *tayyib* food education also reveals that improvements in knowledge do not automatically correspond with favorable changes in attitudes, suggesting limitations in educational approaches that focus predominantly on transmitting information (Umami et al., 2023). Broader evidence concerning school-based dietary interventions remains concentrated in high-income countries, while the limited documentation of participatory program development restricts the direct transferability of intervention models to different educational and sociocultural environments (Samad et al., 2024). These limitations reveal a contextual and pedagogical research gap concerning how religious food principles, nutritional literacy, and practical food safety competencies can be combined into a coherent educational experience for Indonesian adolescents. The gap is particularly relevant to the design of community outreach activities at SMA Sunda Kelapa, Jakarta, where an age-appropriate educational approach must connect conceptual understanding with realistic food-related decisions in the school environment.

The unresolved relationship between nutritional information, halal awareness, and practical consumption skills has important implications for the effectiveness of school-based food education and the broader educational value of the MBG program. Community outreach involving nutrition education through traffic light nutrition cards has demonstrated the usefulness of structured and accessible instructional materials for strengthening nutritional understanding among elementary school students receiving MBG meals (Rahmiwati et al., 2026). Differences in MBG menu acceptability associated with students' nutritional knowledge and eating habits further indicate that the successful provision of meals requires consideration of learners' understanding and established consumption practices (Srimiati et al., 2026). Nutrition education research involving adolescents also emphasizes the need to distinguish knowledge, attitudes, and dietary quality, since these dimensions represent related but analytically different aspects of food-related learning (Raut et al., 2024). Educational programs incorporating halal principles into food safety literacy provide an additional practical foundation for connecting religiously relevant information with students' capacity to recognize food quality and consumption-related risks (Mahmudah et al., 2025). Without an integrated educational approach, students may understand halal certification without recognizing nutritional inadequacy, identify nutritious foods without considering their religious permissibility, or overlook hygiene and safety requirements during food consumption, thereby limiting the practical contribution of school-based nutrition initiatives.

The present community outreach initiative is positioned at the intersection of adolescent nutrition education, Islamic food literacy, and the practical implementation of MBG-related learning within a general senior high school environment. Existing Qur'anic interpretations of halal and *thayyib* food in relation to MBG establish a conceptual foundation for understanding religious permissibility and wholesome consumption, whereas the present initiative focuses on translating these principles into practical educational competencies applicable to students' daily food choices (Bayhaqi et al., 2026). Faith-based nutritional scholarship provides further justification for integrating religious values into healthy eating education, although the proposed approach treats religious understanding as one component of broader nutritional and food safety literacy rather than an independent guarantee of behavioral improvement (Zakaria et al., 2024). Research advocating the incorporation of halal considerations into healthy dietary patterns similarly reinforces the importance of aligning religious requirements with nutritional well-being and inclusive food environments (Keleher et al., 2024). Compared with MBG-oriented educational activities emphasizing balanced nutrition through instructional media, this initiative proposes an integrated learning focus encompassing halal recognition, *thayyib* principles, food labeling, nutritional composition, hygiene, and appropriate responses to potential food safety concerns (Rahmiwati et al., 2026). Its proposed novelty lies in adapting these interconnected educational dimensions to senior high school students at SMA Sunda Kelapa, Jakarta, through a community outreach framework that situates food literacy within the practical circumstances of the MBG program. This position establishes a specific contribution to applied educational practice by linking religiously informed food selection with nutritional reasoning and everyday consumption competencies without assuming that the intervention will necessarily produce behavioral changes.

This community outreach activity aims to strengthen students' knowledge and practical understanding of halal and *thayyib* food intake in relation to the MBG program at SMA Sunda Kelapa, Jakarta. The initiative specifically seeks to explain the relationship between religious food permissibility, balanced nutritional composition, food hygiene, and safety requirements as complementary considerations in responsible dietary decision-making. Its educational objectives include improving students' ability to recognize reliable halal information, interpret relevant food labels, identify the components of balanced meals, and distinguish nutritional quality from religious permissibility. The activity also seeks to develop awareness of safe food consumption practices, appropriate responses to potentially unsafe meals, and the application of food-related knowledge within school and household environments. Student understanding is intended to be examined through an appropriate educational evaluation process, providing a basis for assessing the immediate learning outcomes of the outreach activity without presupposing its effectiveness. The expected contribution is a context-sensitive model of community-based food education that integrates Islamic dietary principles, nutritional literacy, and practical food safety awareness while supporting the educational dimension of the MBG program for senior high school students.

METHODS

The community outreach activity was conducted through a school-based educational approach involving students at SMA Sunda Kelapa, Jakarta, with an emphasis on halal and thayyib food consumption within the Free Nutritious Meals (Makan Bergizi Gratis, MBG) program. The preparation stage involved administrative coordination with relevant institutions, identification of students' educational needs through initial discussions, and development of instructional materials addressing halal principles, balanced nutrition, food hygiene, and responsible consumption practices. The integration of halal principles into educational materials was informed by approaches emphasizing the relationship between religious dietary requirements and food safety literacy among students (Mahmudah et al., 2025). Educational content distinguished religious permissibility from nutritional adequacy to support a comprehensive understanding of healthy and culturally appropriate dietary choices (Keleher et al., 2024). The outreach team prepared presentation materials, food label examples, meal illustrations, case-analysis worksheets, and evaluation instruments to facilitate structured learning and participant engagement. The selection of accessible instructional resources was consistent with school-based nutrition education approaches that employ visual materials to strengthen students' understanding of healthy food consumption (Rahmiwati et al., 2026).

The implementation consisted of three principal stages covering halal and thayyib education, balanced nutrition and MBG menu literacy, and the closing evaluation conducted by the lecturer team. The first stage introduced halal food requirements, ingredient identification, processing considerations, and verification of halal information through official certification sources, emphasizing the importance of informed food selection (Umami et al., 2023). The second stage addressed the nutritional functions of carbohydrates, proteins, fats, vitamins, minerals, and fiber through illustrations of balanced meals containing staple foods, protein sources, vegetables, and fruits. The instructional approach emphasized nutritional understanding and practical food selection, reflecting the relevance of adolescent nutrition education to dietary knowledge and attitudes (Raut et al., 2024). Food safety instruction addressed hand hygiene, food handling, contamination prevention, and responsible consumption practices while connecting wholesome dietary principles with religiously informed health education (Zakaria et al., 2024). The final stage involved an internal evaluation by the lecturer team to assess the implementation of the educational activity, followed by documentation, reflection on the outreach process, and preparation of the activity report.

RESULTS AND DISCUSSION

Implementation of Halal and Thayyib Food Education within the MBG Program

The community outreach activity at SMA Sunda Kelapa, Jakarta, was conducted through a school-based educational approach emphasizing halal and *thayyib* food consumption within Indonesia's Free Nutritious Meals (*Makan Bergizi Gratis*, MBG) program. The activity addressed the educational dimension of school feeding by connecting food provision with students' understanding of religious permissibility, nutritional quality, and safe consumption practices. Research on the implementation of free nutritious meals in Indonesian schools has identified students' concentration as an educational outcome associated with structured nutritional support, indicating the relevance of school feeding to learning conditions (Arifin et al., 2025). Previous evaluations of Indonesian school feeding initiatives have also examined nutritional outcomes and the learning environment, demonstrating that food assistance should be understood within broader educational and health-related objectives (Pramesthi et al., 2025). The outreach program consequently emphasized the importance of developing food literacy alongside the provision of nutritious meals rather than treating food distribution as an isolated intervention. This orientation positioned students as active participants in understanding food quality, identifying relevant consumption considerations, and recognizing their responsibilities within the school environment. Conceptual discussions of MBG evaluation based on *halalan thayyiban* principles further support the integration of religious values, nutritional considerations, and educational objectives into school-based food programs (Nasir et al., 2026).

The preparation stage involved administrative coordination with relevant institutions, initial discussions concerning educational needs, and the development of instructional materials appropriate to the school environment. These activities were directed toward identifying relevant learning topics, considering students' experiences with MBG menus, and selecting instructional approaches suitable for adolescent participants. The preparatory process addressed the need to connect educational content with situations encountered by students when receiving school meals, purchasing packaged foods, and making everyday dietary decisions. Comparative research on food education within school curricula indicates that meaningful food literacy requires learning opportunities extending beyond basic nutritional information toward practical understanding and informed food choices (Smith et al., 2022). International guidance on linking school meals with food and nutrition education similarly emphasizes the educational value of connecting meal provision with structured learning experiences and supportive school environments (Food and Agriculture Organization of the United Nations & World Food Programme, 2026). The preparation therefore established an instructional foundation combining school-based food experiences with religious, nutritional, and hygiene-related learning objectives, although the available documentation does not specify the number of participants involved in the initial needs identification.

The educational framework integrated three interconnected components consisting of halal and *thayyib* principles, balanced nutrition, and food safety literacy. Halal education addressed the permissibility of food ingredients and production processes, while the *thayyib* component emphasized food suitability, cleanliness, safety, and nutritional value. The distinction was necessary because religious permissibility and nutritional adequacy represent different dimensions of food quality that

require separate consideration before being integrated into responsible consumption practices. Research examining halal-inclusive dietary patterns among school and university populations has highlighted the importance of accommodating religious dietary requirements while maintaining nutritional adequacy and equitable access to healthy foods (Keleher et al., 2024). Qur'anic interpretations of halal and *thayyib* food in relation to MBG also provide a conceptual foundation for connecting religious food requirements with wholesome consumption and public nutritional objectives (Bayhaqi et al., 2026). The instructional materials translated these complementary principles into practical examples involving food ingredients, processing conditions, meal composition, and safe handling procedures. Religious-based nutritional scholarship further recognizes the potential relevance of *halalan toyyiban* principles in supporting healthy dietary understanding among young people, reinforcing the educational justification for combining these topics within a unified outreach framework (Zakaria et al., 2024).

The lecturer team prepared presentation materials, food label illustrations, examples of meal composition, case-analysis worksheets, and supporting evaluation instruments to facilitate the delivery of educational content. These instructional resources were organized to connect conceptual explanations with familiar food products and consumption situations encountered by senior high school students. Visual representations of packaged food information and meal components provided a basis for explaining the relationship between religious requirements, nutritional characteristics, and practical food selection. Community-based educational initiatives integrating halal principles with food safety literacy have demonstrated the relevance of applied learning materials for communicating religiously informed food practices among students (Mahmudah et al., 2025). Research on adolescent nutrition education also indicates that knowledge, attitudes, and dietary practices should be examined as related but distinct learning dimensions, making it necessary to differentiate instructional exposure from demonstrated behavioral improvement (Raut et al., 2024). The involvement of lecturers and students formed the institutional basis of the outreach activity, while the available documentation does not provide sufficient information to quantify attendance, participation intensity, or individual learning outcomes.



Figure 1. Lecturer Team with Students

The first instructional stage focused on introducing halal and *thayyib* food principles through explanations of permissible ingredients, relevant processing conditions, and the importance of reliable product information. Educational content distinguished food characteristics that can be observed directly from halal status, which requires consideration of ingredients, production processes, and applicable certification information. Students were introduced to practical verification procedures involving the examination of food labels, recognition of halal certification marks, identification of producers, and consultation of official information sources when clarification was necessary. Previous research examining halal and *tayyib* food education identified improvements in participants' knowledge without corresponding significant changes in attitudes, indicating that information acquisition and attitudinal development should not be treated as equivalent outcomes (Umami et al., 2023). Research concerning Muslim students' awareness of *halalan tayyiban* principles similarly emphasizes the

importance of distinguishing conceptual familiarity from a more comprehensive understanding of dietary decision-making (Shahrom et al., 2025). The educational approach also emphasized responsible communication by discouraging unsupported conclusions about a product's halal status when reliable information remained incomplete. Discussions of halal assurance within the MBG program reinforce the importance of consumer protection and institutional responsibility, providing a relevant basis for teaching students to seek verified information rather than relying on assumptions or unsubstantiated claims (Safitri et al., 2026).

The second instructional stage addressed balanced nutrition and its relationship with the composition of meals distributed through school-based nutritional programs. Educational materials introduced the general functions of carbohydrates, proteins, fats, vitamins, minerals, and dietary fiber in supporting adolescent growth, physiological functions, and daily activities. Illustrative meals were examined according to the presence of staple foods, animal or plant-based protein sources, vegetables, and fruits, emphasizing dietary diversity rather than assessing nutritional adequacy solely from portion appearance. Indonesia's *Isi Piringku* guidance provides a practical educational reference for introducing balanced meal composition through recognizable food groups and proportions appropriate for general dietary education (Kementerian Kesehatan Republik Indonesia, 2024). Community nutrition education utilizing traffic light nutrition cards within the MBG program has also demonstrated the relevance of accessible instructional media for strengthening students' nutritional understanding (Rahmiwati et al., 2026). The learning process consequently emphasized the relationship between food variety, nutrient functions, and responsible meal selection without presenting unverified nutrient calculations or individualized nutritional assessments as findings from the outreach activity.



Figure 2. Presentation of Educational Materials

Food safety education was incorporated into the instructional content to clarify that religiously permissible food must also satisfy appropriate standards of hygiene, handling, and consumption suitability. The materials addressed handwashing before eating, the cleanliness of eating utensils, the prevention of food contamination, and the recognition of conditions that may indicate food deterioration. Students were introduced to appropriate responses when encountering potentially unsafe meals, including avoiding consumption of suspicious food and informing teachers or designated school personnel. The instructional approach distinguished students' responsibilities for personal hygiene and reporting from the technical obligations of food providers and competent authorities concerning preparation, storage, distribution, and safety control. World Health Organization guidance identifies protection from biological and chemical contamination as an essential consideration in healthy diets, supporting the integration of food safety into nutrition education (World Health Organization, 2026a). National efforts to strengthen food safety supervision within the MBG program similarly demonstrate the importance of institutional oversight and preventive measures in maintaining the quality of meals provided to schoolchildren (Badan Gizi Nasional, 2026). The educational contribution of this component therefore concerned the development of appropriate consumption awareness and reporting

practices without assigning students responsibility for technical food inspections or institutional compliance assessments.

The closing stage consisted of an internal evaluation by the lecturer team, reflection on the educational activities, documentation of implementation, and preparation of the community outreach report. The evaluation was directed toward reviewing the organization and delivery of the educational activity, although the available documentation does not report participant-level assessment scores or quantified changes in knowledge and behavior. This distinction is important because the completion of educational activities establishes implementation evidence but does not independently demonstrate intervention effectiveness. An umbrella review of school-based healthy eating interventions highlights the importance of intervention design and evaluation quality when interpreting educational outcomes among adolescents (Samad et al., 2024). Evidence synthesized from school meal programs also indicates that program outcomes should be interpreted according to the specific intervention characteristics and evaluation measures employed rather than generalized across different educational settings (Spill et al., 2024). The documented sequence of preparation, instructional delivery, and internal review provides a descriptive foundation for the outreach activity while indicating the need for more systematic outcome measurement in subsequent educational evaluations.

Integration of Halal–Thayyib Principles, Balanced Nutrition, and Food Safety Literacy

The integration of halal and *thayyib* principles within the MBG educational activity established a conceptual foundation for examining food quality beyond the fulfillment of immediate nutritional needs. Halal principles refer to religious permissibility based on food ingredients, processing methods, and compliance with applicable Islamic requirements, whereas *thayyib* encompasses broader considerations of wholesomeness, safety, cleanliness, and suitability for consumption. Qur'anic interpretations of halal and *thayyib* emphasize their complementary relationship, particularly when food provision is associated with public health objectives and nutritional welfare (Bayhaqi et al., 2026). The distinction is analytically significant because religiously permissible food does not automatically provide balanced nutritional composition or guarantee appropriate handling throughout the food supply process. Research addressing halal-inclusive dietary patterns among students highlights the importance of reconciling religious food requirements with nutritional adequacy and equitable access to healthy meals (Keleher et al., 2024). The educational framework consequently positioned halal and *thayyib* as interconnected criteria through which students could develop a more comprehensive understanding of responsible food selection, supported by religiously informed approaches to healthy dietary practices (Zakaria et al., 2024).

The legal dimension of halal food education was introduced to clarify the institutional basis for determining and communicating the permissibility of food products in Indonesia. Law Number 33 of 2014 concerning Halal Product Assurance establishes the national framework for halal product assurance and provides legal recognition for consumer access to reliable information concerning product permissibility (Pemerintah Republik Indonesia, 2014). Subsequent legislative developments under Law Number 6 of 2023 form part of the regulatory framework governing halal product assurance and related administrative requirements (Pemerintah Republik Indonesia, 2023). Government Regulation Number 42 of 2024 further specifies provisions concerning halal product assurance implementation, including certification and responsibilities associated with regulated products (Pemerintah Republik Indonesia, 2024a). These regulations provided an appropriate reference for introducing the distinction between officially verified halal information and assumptions based solely on product appearance or promotional claims. The educational material translated the regulatory framework into accessible information about certification marks, product identification, and the importance of consulting authoritative sources when uncertainty arises. Legal explanations were deliberately positioned as supporting knowledge rather than technical certification training because the educational objective concerned students' ability to interpret food information responsibly within their everyday consumption environment.

The practical dimension of halal literacy emphasized the relationship between food information, consumer judgment, and the reliability of product verification procedures. Students were introduced to the importance of examining packaging information, identifying producers, recognizing halal certification marks, and consulting official verification channels when additional clarification was required. Previous community-based educational initiatives have demonstrated the relevance of

integrating halal principles into food safety literacy to strengthen students' understanding of responsible food selection (Mahmudah et al., 2025). The instructional content also distinguished an absence of immediately available certification information from definitive evidence that a particular product is religiously prohibited. Research examining halal and *tayyib* education indicates that improved knowledge does not necessarily produce equivalent attitudinal changes, reinforcing the need to teach careful judgment rather than rely exclusively on factual explanations (Umami et al., 2023). Consumer protection scholarship concerning halal assurance within MBG further supports the importance of reliable certification information and institutional accountability, while recognizing that students should not independently make unsupported determinations concerning product compliance (Safitri et al., 2026).

The integration of religious dietary principles with nutritional and food safety considerations required an educational structure capable of distinguishing separate dimensions of food quality while explaining their practical relationships. Halal literacy addressed the permissibility of ingredients and processing conditions, whereas *thayyib* education introduced broader judgments concerning food suitability and responsible consumption. Nutritional literacy emphasized the importance of sufficient and varied nutrient intake, reflecting established guidance that healthy diets require adequacy, balance, moderation, and diversity (World Health Organization, 2026a). Food safety literacy complemented these dimensions by addressing hygiene, contamination prevention, and appropriate responses to potentially unsuitable food. Research on school-based healthy eating interventions indicates that nutritional education should be connected with supportive learning environments and practical food-related activities rather than limited to the transmission of dietary information (Samad et al., 2024). The integration of halal principles into applied food education further demonstrates the relevance of combining religious understanding with food safety awareness to support informed consumption practices (Mahmudah et al., 2025). Table 1 presents the educational dimensions and corresponding practical applications derived from the instructional framework used in the outreach activity.

Table 1. Integration of Halal–Thayyib Principles into School-Based Food Education

Educational Dimension	Learning Content	Practical Application
Halal literacy	Permissible ingredients and certification	Checking official halal information
Thayyib principles	Food quality and suitability	Recognizing wholesome food choices
Balanced nutrition	Nutrients and meal composition	Identifying balanced meal components
Food safety	Hygiene and contamination prevention	Applying safe consumption practices

Table 1 illustrates how the educational framework translated complementary food quality principles into specific learning content and practical applications suitable for senior high school students. The distinction between halal literacy and *thayyib* principles was maintained to prevent religious permissibility from being interpreted as an automatic indication of nutritional adequacy or food safety. Balanced nutrition education introduced the physiological importance of carbohydrates, proteins, fats, vitamins, minerals, and dietary fiber in supporting adolescent growth and daily functioning. Indonesia's Balanced Nutrition Guidelines provide a foundation for understanding dietary diversity, hygienic behavior, physical activity, and appropriate nutritional practices as interconnected components of health promotion (Kementerian Kesehatan Republik Indonesia, 2014). Adolescent nutrition education research also supports the examination of nutritional knowledge, dietary attitudes, and diet quality as separate but related components of effective educational interventions (Raut et al., 2024). The instructional framework consequently provided a structured means of explaining food quality without reducing student understanding to a single religious, nutritional, or sensory criterion.

The application of balanced nutrition principles to MBG menu education involved illustrative analysis of food groups commonly represented in school meals. Educational materials introduced staple foods as carbohydrate sources, animal and plant-based foods as protein sources, and vegetables and fruits as contributors to dietary fiber, vitamins, and minerals. The Indonesian *Isi Piringku* guidance provides a recognizable visual framework for illustrating the proportions and diversity of food groups

within a balanced meal (Kementerian Kesehatan Republik Indonesia, 2024). The educational analysis emphasized that meal quality cannot be evaluated solely through portion size or visual appearance because nutritional adequacy depends on ingredient composition, quantities, preparation methods, and individual dietary requirements. Research examining menu acceptability within Indonesia's MBG program indicates that student preferences and eating habits are relevant considerations for understanding how school meals are received by their intended beneficiaries (Srimiati et al., 2026). Educational interventions employing traffic light nutrition cards within MBG activities also demonstrate the potential usefulness of accessible instructional tools for communicating nutritional information to schoolchildren (Rahmiwati et al., 2026). The outreach materials therefore connected general nutritional principles with familiar meal examples without claiming that the illustrated menus had undergone laboratory analysis, individualized dietary assessment, or verified compliance with specific nutrient requirements.

Food safety literacy constituted an additional educational dimension because wholesome consumption depends on appropriate hygiene and food handling practices throughout the consumption process. Instructional content addressed handwashing with soap, the cleanliness of eating utensils, the maintenance of hygienic eating areas, and precautions against contamination during meal consumption. International school meal guidance recognizes food safety and appropriate nutritional standards as integral considerations in providing meals that support children's health and educational development (Food and Agriculture Organization of the United Nations, 2019). Students were also introduced to observable warning signs, including unusual odors, damaged packaging, and conspicuous changes in food appearance, while being informed that some forms of contamination cannot be identified through sensory inspection alone. The World Health Organization emphasizes the importance of protection against biological and chemical contamination as part of healthy dietary practices, underscoring the limitations of evaluating food safety exclusively through appearance (World Health Organization, 2026a). Indonesia's efforts to strengthen MBG food safety supervision further demonstrate that educational awareness must operate alongside institutional monitoring and preventive controls rather than replacing formal food quality assurance procedures (Badan Gizi Nasional, 2026).

The final dimension of integrated food literacy concerned appropriate responses to suspected food safety problems and the responsibilities associated with informed consumption. Instructional explanations emphasized that students encountering potentially unsafe meals should avoid consuming the suspected food and communicate relevant concerns to teachers or designated school personnel. Procedures for reporting suspected food problems were distinguished from technical inspection, contamination diagnosis, and regulatory enforcement, which remain responsibilities of competent authorities and food service providers. World Health Organization guidance concerning healthy school food environments supports the need for coordinated institutional measures that extend beyond individual nutritional knowledge and address the broader conditions influencing safe food consumption (World Health Organization, 2026b). National supervision initiatives within MBG similarly establish the relevance of institutional responsibility in maintaining food quality and responding to potential safety concerns (Badan Gizi Nasional, 2026). The instructional approach also addressed responsible communication by emphasizing that concerns about product safety or halal status should be reported through appropriate channels without circulating unverified allegations. Educational and institutional responsibilities were therefore presented as complementary components of school food governance, consistent with the broader recognition that effective nutrition programs require supportive environments, informed participation, and reliable operational safeguards (World Health Organization, 2026c).

Educational Evaluation, Implementation Considerations, and Implications for School-Based MBG Programs

The educational evaluation of the community outreach activity at SMA Sunda Kelapa, Jakarta, consisted of an internal review conducted by the lecturer team following the instructional activities. The documented process included reflection on the delivery of halal and *thayyib* materials, balanced nutrition education, food safety explanations, and preparation of the activity report. This evaluation primarily addressed program implementation rather than formally measured changes in students' knowledge, attitudes, or consumption practices. Research on school-based nutrition interventions emphasizes the importance of distinguishing educational implementation from measurable participant

outcomes when interpreting the effectiveness of health promotion activities (Samad et al., 2024). Systematic evidence concerning universal school meal programs similarly indicates that conclusions about educational benefits should correspond to the specific outcomes and evaluation procedures employed (Spill et al., 2024). The available documentation does not provide participant attendance totals, pre-intervention assessments, post-intervention scores, or validated measurements of behavioral change. The evaluation can consequently be interpreted as a descriptive assessment of educational implementation and instructional coverage rather than empirical confirmation of measurable intervention effectiveness.

The educational relevance of the outreach activity was associated with its focus on adolescents who encounter diverse food choices through school meals, packaged products, and everyday consumption practices. The instructional content connected religious permissibility with nutritional composition and food safety while maintaining the conceptual distinctions necessary for responsible dietary judgment. Research examining Muslim students' understanding of *halalan thayyiban* principles identifies religious food awareness as a relevant dimension of food-related education and informed consumption (Shahrom et al., 2025). Indonesian scholarship concerning the integration of Islamic values into MBG-related educational activities also recognizes the role of teachers in connecting religious principles with health and well-being (Arifzapni et al., 2025). The educational materials prepared for SMA Sunda Kelapa translated these considerations into familiar examples involving halal certification, balanced meals, food labeling, and safe handling practices. Their correspondence with everyday consumption situations provided a contextually relevant instructional orientation, although the extent to which students subsequently applied this knowledge cannot be established from the available documentation.

The instructional approach incorporated presentations, food label examples, meal illustrations, and case-analysis worksheets to communicate food-related concepts through recognizable educational materials. Product labeling examples were intended to illustrate the verification of halal information, whereas meal illustrations supported discussion of dietary diversity and appropriate nutritional composition. These resources also enabled distinctions between information directly observable from food products and characteristics requiring official verification or technical assessment. Comparative research on school food education curricula emphasizes the importance of practical food literacy that connects instructional knowledge with decisions encountered in everyday life (Smith et al., 2022). Community nutrition education using traffic light nutrition cards within Indonesia's MBG program similarly demonstrates the relevance of accessible visual materials for communicating nutritional information to schoolchildren (Rahmiwati et al., 2026). Research evaluating school-based food education interventions further highlights the need to consider instructional design and delivery conditions when assessing potential educational outcomes (Vaughan et al., 2025). The documented activity, however, does not establish which instructional resources were most effective or whether their use produced measurable improvements in students' dietary understanding.

The documented sequence of activities provides a framework for examining the relationship between educational preparation, instructional implementation, and internal evaluation. Preparation involved administrative coordination, identification of educational needs, and development of teaching materials addressing halal principles, nutritional composition, and food safety. The instructional stages introduced practical food selection, balanced meal components, and appropriate hygiene practices, followed by an internal evaluation and documentation process. International guidance on linking school meals with food and nutrition education emphasizes the importance of aligning educational content with students' everyday food environments and school-based learning experiences (Food and Agriculture Organization of the United Nations & World Food Programme, 2026). The available activities can therefore be organized according to educational objectives, instructional components, and potential evaluation indicators without treating these indicators as formally measured outcomes. Table 2 presents the relationship between the documented implementation stages and their corresponding educational and evaluation dimensions.

Table 2. Educational Activities and Evaluation Framework of the Halal–Thayyib Outreach Program

Activity Stage	Educational Component	Evaluation Focus
Preparation	Institutional coordination, identification of educational needs, and development of instructional materials	Relevance and completeness of educational preparation
Halal–thayyib education	Religious food principles, ingredient identification, halal certification, and product verification	Coverage of halal literacy and responsible food selection
Nutrition and food safety education	Balanced meal composition, nutrient functions, hygiene, and contamination prevention	Coverage of nutritional literacy and safe consumption practices
Closing evaluation	Internal lecturer-team assessment, documentation, reflection, and activity reporting	Implementation review and documentation completeness

Table 2 illustrates the relationship between the educational activities and the aspects that can be considered when reviewing the implementation of the outreach program. Institutional coordination, instructional preparation, and the selection of accessible educational materials represent potential supporting conditions for activities involving senior high school students. Practical implementation may also be influenced by scheduling arrangements, differences in students' initial knowledge, available instructional facilities, and the complexity of information concerning processed food ingredients. These considerations should be distinguished from empirically identified implementation barriers because the available documentation does not provide systematic evidence concerning specific operational difficulties. Research examining school-based healthy eating interventions recognizes that institutional conditions and supportive learning environments can influence the delivery and sustainability of nutritional education programs (Samad et al., 2024). Food and Agriculture Organization guidance also emphasizes the relevance of school communities and everyday food environments in supporting meaningful food and nutrition education (Food and Agriculture Organization of the United Nations, n.d.-a). Subsequent outreach activities could benefit from systematic recording of implementation conditions and participant feedback to identify practical barriers and determine appropriate improvements.

The principal methodological limitation of the educational evaluation concerns the absence of documented participant-level measurements that would permit an objective assessment of learning outcomes. Without recorded pretest and posttest results, changes in students' halal literacy, nutritional knowledge, or food safety understanding cannot be quantified or attributed to the educational activity. Even demonstrated improvements in factual knowledge would not independently establish corresponding changes in dietary attitudes or everyday consumption behavior. Indonesian research concerning halal and *tayyib* food education has identified differences between knowledge-related and attitudinal outcomes, demonstrating the importance of evaluating these dimensions separately (Umami et al., 2023). Research examining digital *halalan-toyyiban* educational interventions likewise distinguishes dietary knowledge, attitudes, and practices as related but analytically separate components of nutritional learning (Zakaria et al., 2025). Future educational evaluations would require clearly defined learning indicators, documented assessment instruments, and appropriate analytical procedures before conclusions regarding intervention effectiveness could be supported.

The practical implications for SMA Sunda Kelapa concern opportunities to reinforce halal literacy, balanced nutrition, and food safety awareness through existing educational activities and school communication practices. Teachers could incorporate relevant examples of meal composition, food labeling, and religious dietary requirements into health-related learning activities without replacing the responsibilities of specialized food safety personnel. The school could also consider accessible educational materials addressing hand hygiene, dietary diversity, and verification of halal information to support students' independent understanding of responsible consumption. International guidance concerning healthy school food environments emphasizes the importance of coordinated educational and institutional measures in promoting healthier dietary practices among students (World Health

Organization, 2026b). National initiatives to strengthen MBG food safety supervision similarly indicate that consumer education must operate alongside formal institutional monitoring and preventive food safety procedures (Badan Gizi Nasional, 2026). Scholarship addressing halal assurance within MBG further reinforces the distinction between students' awareness of religious food requirements and the institutional responsibility to ensure compliance with applicable product standards (Safitri et al., 2026). These implications represent potential directions for educational reinforcement rather than institutional changes already demonstrated by the reported outreach activity.

The potential contribution of this community outreach approach lies in connecting halal and *thayyib* principles, balanced nutrition, and food safety education within a coherent framework relevant to students' daily food consumption. Its documented implementation establishes the instructional scope and organizational sequence of the activity while leaving the magnitude and sustainability of educational outcomes undetermined. Research involving integrated school-based nutrition interventions provides a useful comparative foundation for examining how educational activities can complement meal provision and broader health promotion objectives (Wang et al., 2024). International scholarship on school food and nutrition education also supports the integration of practical dietary learning into environments where students regularly encounter food-related decisions (Food and Agriculture Organization of the United Nations, n.d.-b). Future implementation could incorporate systematic participant documentation, structured assessment of halal and nutritional literacy, and follow-up evaluation procedures adapted to institutional resources. Such refinements would strengthen the methodological foundation of community outreach reporting by distinguishing instructional implementation, immediate learning outcomes, and longer-term behavioral changes while maintaining appropriate alignment between educational objectives and available empirical evidence.

CONCLUSION

Education on halal and thayyib food intake within the Free Nutritious Meals (Makan Bergizi Gratis, MBG) program at SMA Sunda Kelapa, Jakarta, represents a community outreach initiative integrating halal literacy, balanced nutrition, and food safety education. The activity emphasized that understanding halal food requires comprehensive knowledge of thayyib principles, including cleanliness, nutritional adequacy, food quality, and consumption safety. The educational process involved institutional preparation, instructional delivery, and internal evaluation supported by presentations, food labeling examples, balanced meal illustrations, and practical explanations of responsible food consumption. These educational components provided an integrated framework for distinguishing religious permissibility from nutritional quality while encouraging informed food selection and appropriate hygiene practices. The activity also highlighted the educational potential of the MBG program beyond meal distribution by connecting students' everyday consumption experiences with religious values and health-related knowledge. Nevertheless, the available documentation does not provide sufficient quantitative or qualitative evidence to establish measurable improvements in students' knowledge, attitudes, or dietary behavior. The findings consequently support the relevance and practical applicability of integrated halal and thayyib education while emphasizing the need for systematic evaluation to determine its educational effectiveness.

The sustainability of halal and thayyib food education requires continuous collaboration among schools, universities, students, parents, and MBG administrators to strengthen food literacy and responsible consumption practices. Schools are encouraged to incorporate halal awareness, balanced nutrition, and food safety principles into regular learning activities and school health programs using accessible instructional materials and practical examples. Students should be encouraged to verify halal certification through reliable sources, recognize balanced meal components, maintain personal hygiene, and report suspected food safety concerns to responsible school personnel without disseminating unverified information. MBG administrators and relevant authorities should maintain compliance with applicable nutritional, halal assurance, hygiene, and food safety standards through appropriate monitoring and quality control procedures. Universities and community outreach teams should strengthen subsequent educational activities through structured learning assessments, participant feedback, and instructional materials adapted to students' educational needs. Future evaluations should incorporate pretest and posttest measurements, clearly defined learning indicators, and follow-up assessments to distinguish immediate knowledge acquisition from sustained changes in dietary attitudes and consumption practices. Continued institutional cooperation and the development of integrated halal

and nutrition literacy modules are expected to support more sustainable school-based food education while providing a stronger empirical foundation for future community outreach initiatives.

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