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Teacher Strategies for Developing Early Childhood Independence through Indonesia's Free Nutritious Meal Program (MBG): An Integrative Review

Maya Dwi Aprilia[1], Ardelia Nabila Hermayana[2]
[1]Universitas Pangeran Diponegoro Nganjuk, Indonesia
[2]Universitas Al azhar, Mesir

*Corresponding Author: mayadwi986@gmail.com
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Abstract:
Independence is a core element of early childhood character development and can be strengthened through daily routines that combine participation, guidance, and social interaction. Indonesia's Free Nutritious Meal Program (Makan Bergizi Gratis, MBG) creates such routines in early childhood education settings, yet teachers need pedagogical strategies that balance children's developmental needs with program management demands. This integrative review synthesizes 25 peer-reviewed journal articles published between 2022 and 2026 on guided play, play-integrated learning, teacher-implemented programs, narrative and dialogic interaction, cognitive foundations, and family involvement in early childhood. None of the reviewed studies examined MBG or mealtimes directly, so the findings are interpreted as indirect evidence. The synthesis identified four analytical categories of teacher strategy: structured routines with graduated adult guidance, active and peer-supported participation, guided talk that frames routines and expected behavior, and family collaboration combined with responsiveness to individual differences. Implementation appears to depend on teacher preparation, the intensity and duration of activities, time and workload, and home-school consistency. The study offers a conceptual framework for teacher-led independence development in meal-related routines and calls for empirical research that evaluates these strategies within MBG settings.

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INTRODUCTION

Early childhood education plays a fundamental role in developing children's independence, responsibility, and social competence. Independence extends beyond performing daily tasks, such as eating and dressing, to include making decisions, managing personal needs, and interacting confidently with others. These abilities develop through consistent practice, appropriate guidance, and meaningful social interactions. Teachers therefore have an important responsibility to create learning environments that encourage children to participate actively in daily activities. Evidence on guided play indicates that adult guidance combined with children's own agency can support learning and development, although its benefits differ across outcomes (Skene et al., 2022). Evidence from play-integrated interventions similarly suggests that developmental goals

can be pursued within activities that children experience as playful and familiar (Berner et al., 2024; Chatzaki et al., 2026). Consequently, everyday routines deserve greater attention as opportunities to strengthen children's independence.

Despite the importance of independence, young children may still depend heavily on adults when completing routine activities. Limited opportunities for independent practice, inconsistent habituation, and excessive adult assistance can restrict children's opportunities to develop self-help skills and responsibility. These challenges require educational strategies that integrate independence-building activities into children's everyday experiences rather than limiting them to formal classroom instruction. Mealtimes provide a relevant context because children can practice self-care, follow routines, communicate with peers, and take responsibility for their belongings. Research on early development also shows that children differ in their cognitive characteristics and home learning environments, both of which are associated with how early competencies such as numeracy develop (Bakker et al., 2023; Gashaj et al., 2023). Therefore, mealtimes can support independence when teachers organize them intentionally and adjust their guidance to individual children.

The implementation of Indonesia's Free Nutritious Meal Program (Makan Bergizi Gratis or MBG) creates opportunities to connect nutritional provision with early childhood education. Beyond providing meals, the program can create meaningful situations in which children practice handwashing, queuing, handling food containers, eating appropriately, and tidying up after meals. However, these learning opportunities do not automatically translate into greater independence. Their educational value depends on how teachers organize activities, demonstrate expected behaviors, provide appropriate assistance, and gradually encourage children to act independently. Research on shared-reading programs delivered in preschool settings, some of them by trained teachers, indicates that structured, routine-based activities can be implemented in classrooms (August et al., 2024; Lacin, 2023; Riad et al., 2024), although these programs concern reading rather than meals. These perspectives support further investigation into the pedagogical opportunities associated with meal-related activities.

Previous research has examined factors relevant to this question from adjacent perspectives. Meta-analytic evidence shows that guided play can outperform direct instruction for some outcomes but not others (Skene et al., 2022), and that dialogic and interactive reading can strengthen children's narrative skills (Özcan, 2026; Xing et al., 2025). Studies of home and family influences point to the role of family interaction quality, parent training, and home-visiting components in children's development (Dias-Broens & van Steensel, 2023; Requa et al., 2022; Sabourin-Guardo et al., 2024). Nevertheless, these sources address different educational contexts and objectives, mainly literacy, narrative, and numeracy. Their findings do not, by themselves, establish which teacher strategies are effective specifically within MBG implementation. This limitation indicates the need for a synthesis connecting independence development, teacher practices, and nutrition-related activities.

The present study addresses this gap by bringing together evidence on adult guidance, routine-embedded learning, and family collaboration from 25 peer-reviewed articles to examine teacher strategies for developing early childhood independence through the MBG program. Its distinctive contribution lies in examining mealtimes as both nutritional activities and structured pedagogical opportunities. Rather than treating independence as an isolated developmental outcome, the study considers how teachers

can integrate self-help skills, responsibility, social interaction, and character education into routine meal-related experiences. It also examines the conditions that facilitate or constrain these strategies, including teachers' preparation, classroom organization, available time, and parental involvement. This integrated perspective aims to establish a clearer understanding of how nutritional programs can contribute to children's broader development. The resulting synthesis can inform the design of practical, developmentally appropriate strategies and identify priorities for future empirical research.

Accordingly, this study addresses three research questions: (1) What strategies can teachers use to develop early childhood independence through the MBG program? (2) What factors support or hinder the implementation of these strategies? (3) How can mealtime activities be optimized to promote independence and character development? This integrative review proposes that the educational value of MBG depends not only on meal provision but also on teachers' intentional pedagogical practices. Specifically, structured routines, opportunities for independent participation, consistent reinforcement of positive behaviors, and collaboration with families may help transform mealtimes into meaningful learning experiences. By synthesizing relevant literature, this study seeks to develop a conceptual framework for teacher-led independence development and provide practical recommendations for educators and policymakers. These contributions may support more holistic implementation of nutrition programs in early childhood education.

RESEARCH METHOD

This study employed a qualitative research approach using an integrative literature review design to identify, examine, and synthesize relevant literature on teacher strategies for developing early childhood independence through the Free Nutritious Meal Program (MBG) (Cooper et al., 2021; Rees et al., 20221; Cronin & Cooper, 2023). An integrative design was selected because evidence that addresses MBG directly is still scarce, and this design allows research from related domains to be combined into a coherent conceptual account. A qualitative approach enables in-depth interpretation of concepts, practices, and contextual factors described in previous studies. The review focused on identifying pedagogical strategies, supporting factors, implementation challenges, and their implications for early childhood education. Sources were selected purposively according to predefined inclusion criteria to ensure their relevance to the research questions.

The study was based on the analysis of published academic literature rather than direct fieldwork. The corpus comprised 25 peer-reviewed journal articles published between 2022 and 2026 in English. Sources were included when they (a) concerned children in early childhood or the early school years; (b) addressed adult guidance, play-integrated or routine-embedded learning, teacher-implemented programs, narrative and dialogic interaction, cognitive or home-environment influences on early development, or family involvement; and (c) were published in peer-reviewed journals. Practice reports and other sources that were not peer-reviewed were excluded. Data were collected through document analysis, which involved identifying, screening, and examining the selected publications. Document analysis offers a systematic means of gathering qualitative evidence from existing written sources. Because the review aimed to connect independence development, teacher practices, and nutrition-related routines, the relevance of each source to MBG was assessed explicitly and reported in the results.

Data analysis followed an iterative process involving data condensation, data display, and conclusion drawing and verification. During data condensation, relevant information was extracted from each selected publication, including authors, publication year, source type, focus, principal findings, and implications for teacher practice. The extracted information was then organized into a comparative table to facilitate the identification of recurring patterns, similarities, and differences across studies. The data display stage involved grouping the findings into thematic categories, including structured routines, participation and peer interaction, guided talk about routines and expected behavior, family collaboration, and factors influencing implementation. Finally, conclusions were drawn by comparing evidence across the sources and verifying whether the emerging themes were consistently supported by the extracted findings. This systematic organization and interpretation of qualitative evidence supports a transparent account of the phenomenon under investigation. The synthesis provided the basis for identifying research gaps and developing practical implications for teachers and policymakers.

RESULTS AND DISCUSSION

Results

Characteristics of the Literature Reviewed

The 25 sources reviewed span five related areas: guided and play-integrated learning (Skene et al., 2022; Berner et al., 2024; Chatzaki et al., 2026); teacher-implemented and dialogic or interactive reading programs (August et al., 2024; Lacin, 2023; Riad et al., 2024; Wall et al., 2022; Özcan, 2026; Xing et al., 2025; Read et al., 2023); narrative and retelling skills (Vretudaki, 2022; Vretudaki & Tafa, 2022; Vretudaki et al., 2023; Lipner et al., 2024; Silva & Cain, 2024; Bouizegarene et al., 2024); cognitive and developmental foundations (Amland et al., 2025; Bakker et al., 2023; De Vita et al., 2022; Gashaj et al., 2023; Cusiter et al., 2025); and family involvement (Dias-Broens & van Steensel, 2023; Niklas et al., 2025; Requa et al., 2022; Sabourin-Guardo et al., 2024). These areas provide complementary evidence, but they do not represent equivalent levels of direct relevance to the MBG program. None of the 25 sources examined MBG, school meals, or mealtime independence directly. The sources include systematic reviews and meta-analyses (Skene et al., 2022; Amland et al., 2025; Cusiter et al., 2025; Özcan, 2026; Xing et al., 2025), experimental and intervention studies, longitudinal studies, and one theoretical account (Bouizegarene et al., 2024).

The sources therefore support a thematic synthesis of related educational practices rather than a statement about the effectiveness of specific strategies in MBG settings. Table 1 summarizes each source and its relevance to the present review.

Table 1. Characteristics of the reviewed sources and their relevance to the review

Author and year	Source type	Focus	Relevance to this review
Amland et al. (2025)	Systematic review and meta-analysis	Cognitive factors underlying mathematical skills	Informs attention to children's cognitive characteristics when designing guided routines.
August et al. (2024)	Intervention study	Interactive read-aloud program for three-year-old dual-language learners, delivered by trained teachers	Illustrates teacher-delivered classroom activities and the role of teacher training.

Author and year	Source type	Focus	Relevance to this review
Bakker et al. (2023)	Longitudinal study	Preschool numerical abilities, with cognitive and environmental correlates and links to later mathematics achievement	Informs attention to individual and environmental differences among children.
Berner et al. (2024)	Experimental study (two experiments)	Play-integrated fostering of basic mathematical skills	Illustrates pursuing developmental goals within playful, structured activities.
Bouizegarene et al. (2024)	Theoretical (integrative) article	Narrative as active inference: cognitive and social functions in adaptation	Provides a conceptual basis for using narrative framing to organize experience and social expectations.
Chatzaki et al. (2026)	Randomized intervention study (208 children)	Four-session and six-session number board game compared with a control group in kindergartners	Shows that short, facilitated, small-group activities can be beneficial, which is relevant to time constraints.
Cusiter et al. (2025)	Systematic meta-analytic review	Combined language and code emergent literacy intervention for at-risk preschool children	Informs consideration of multi-component support for at-risk children.
De Vita et al. (2022)	Empirical study	Working memory domains and processes in early mathematical knowledge between preschool and first grade	Informs attention to differences in children's cognitive characteristics.
Dias-Broens & van Steensel (2023)	Intervention study	Home visiting within a shared reading intervention for children from low-SES and ethnic minority families	Illustrates school-family collaboration.
Gashaj et al. (2023)	Empirical study	Early numeracy, home learning environment, and math anxiety as foundations of later math achievement	Highlights the role of the home learning environment.
Lacin (2023)	Intervention study with experimental and control classes (four classes)	Twelve-week teacher-implemented shared-reading intervention in preschools	Illustrates teacher implementation supported by an intervention program and checklists.
Lipner et al. (2024)	Empirical study	Effects of narrative task complexity and language on macrostructure in bilingual kindergarten children	Reminds that task demands and language background affect children's performance.
Niklas et al. (2025)	Empirical study	Learning apps used at home and children's preparation for school	Illustrates home-based support linked to school readiness.
Özcan (2026)	Systematic review (16 studies)	Dialogic reading and preschool narrative skills (g = 0.62)	Supports guided conversation as a scaffold for expressing and organizing experience.
Read et al. (2023)	Peer-reviewed article	Challenges of screen-mediated shared reading for children's learning and engagement	Raises engagement considerations when screens compete for children's attention.
Requa et al. (2022)	Intervention study	Teaching parents of at-risk preschoolers vocabulary instruction techniques during shared storybook reading	Illustrates parent training as a form of family collaboration.

Author and year	Source type	Focus	Relevance to this review
Riad et al. (2024)	Pragmatic randomized trial	Dialogic reading in preschool for additional language learners	Illustrates implementation under real-world preschool conditions.
Sabourin-Guardo et al. (2024)	Longitudinal study	Quality of family interactions and school-age children's narrative abilities under financial insecurity	Highlights family interaction quality and economic context.
Silva & Cain (2024)	Empirical study	Contributions of home literacy, vocabulary, and grammar to narrative production and comprehension	Highlights the contribution of home experiences to language-based skills.
Skene et al. (2022)	Systematic review and meta-analysis (39 studies; 17 in the meta-analysis; N = 3,893)	Guidance during play and children's learning and development	Shows advantages of guided play for some outcomes but not others; supports balancing guidance with child agency.
Vretudaki (2022)	Empirical study	Moving from narrative comprehension to narrative production skills	Informs graduated support from understanding to expression.
Vretudaki & Tafa (2022)	Intervention study	Programme for personal and fictional narrative development in kindergarten children	Illustrates structured, teacher-led narrative activity.
Vretudaki et al. (2023)	Empirical study	Retelling as a means of story structure and story content understanding	Supports recounting as a way to consolidate understanding of sequences.
Wall et al. (2022)	Experimental study (29 children)	Embodied action as scaffolding for dialogic reading	Illustrates hands-on action as support for learning.
Xing et al. (2025)	Meta-analysis (25 studies)	Interactive reading and narrative abilities (g = 0.425), moderated by duration and interaction partner	Suggests that peer participation and sustained duration may enhance effects.

The table presents the 25 reviewed sources and their relevance to this study. Because none of them examines MBG or mealtimes directly, the relevance column indicates how each source informs the analysis by analogy and should not be read as evidence of effectiveness in MBG settings.

Teachers' Roles in Facilitating Independence

The reviewed literature identifies adult guidance as a central mechanism through which everyday activities become learning opportunities. Skene et al. (2022) synthesized evidence from 39 studies, 17 of which entered the meta-analysis (N = 3,893 children), and found that guided play outperformed direct instruction for early mathematics, shape knowledge, and task switching, and outperformed free play for spatial vocabulary, while differences were not identified for other outcomes. The authors also noted considerable heterogeneity in how guidance was conceptualized and implemented. Berner et al. (2024) examined play-integrated fostering of basic mathematical skills in two experiments, and Chatzaki et al. (2026) found that kindergartners who played a number board game with an adult facilitator for four or six sessions progressed to higher

developmental levels more often than a business-as-usual control group (50.6%, 69.6%, and 27.4%, respectively). Together, these studies show how teachers or facilitators can pursue developmental goals through short, structured, playful activities.

These studies address complementary dimensions of teaching. Skene et al. provide cross-study evidence about the role of adult guidance, whereas Berner et al. and Chatzaki et al. provide experimental evidence from specific game-based interventions. None of them, however, establishes how teachers manage independence-building activities during MBG implementation. Their relevance to MBG is therefore indirect: they inform the analysis of teacher guidance, child agency, and the structuring of short activities without demonstrating program-specific effects.

Teacher Strategies for Developing Independence Through Mealtime Activities

The reviewed literature supports the identification of four analytical categories for examining teacher strategies. These categories organize the evidence and should not be interpreted as four independently validated MBG interventions.

Structured routines and graduated assistance. Repeated participation in structured activities provides opportunities for children to practice skills and take on responsibility. Skene et al. (2022) point to guidance that keeps the learning goal clear while leaving children some agency, and Vretudaki (2022) examined how children can be supported to move from narrative comprehension to narrative production. Applied to mealtimes, these perspectives provide a basis for examining routines such as handwashing, collecting food containers, eating, and tidying up, with teacher assistance reduced as children become able to perform steps on their own. However, none of the reviewed evidence establishes the effectiveness of this specific sequence within MBG settings.

Active and peer-supported participation. Several sources suggest that children's active involvement, including action and interaction with peers, can strengthen adult-led activities. Wall et al. (2022) examined how embodied action can scaffold dialogic reading, and the meta-analysis by Xing et al. (2025) of 25 studies reported that interactive reading had a moderate positive effect on children's narrative abilities ($g = 0.425$), with the largest effect when peers were the interaction partners ($g = 0.675$) and a smaller one when teachers were ($g = 0.164$). In Chatzaki et al. (2026), children played the board game in small groups with an adult facilitator, and the authors suggested that the collaborative atmosphere may have contributed to the benefits. These findings support the relevance of hands-on, peer-supported participation as an analytical theme for mealtimes, for example when children serve, pass, and clear items together. They concern reading and number games, however, and cannot establish the magnitude of any effect on independence.

Guided talk that frames routines and expected behavior. A third group of sources concerns how adult-child conversation helps children organize and express what they experience. Özcan (2026) synthesized 16 experimental and quasi-experimental studies and reported a positive overall effect of dialogic reading on preschoolers' narrative skills ($g = 0.62$), and Vretudaki et al. (2023) examined retelling as a means of developing understanding of story structure and content. Vretudaki and Tafa (2022) evaluated an intervention programme for personal and fictional narratives in kindergarten children, while Lipner et al. (2024) examined how narrative task complexity and language affect macrostructure in bilingual kindergarten children, a reminder that task demands should

be matched to children's language backgrounds. At a more theoretical level, Bouizegarene et al. (2024) present narrative as serving cognitive and social functions in adaptation. Applied to MBG, teachers might use short conversations and the recounting of what happened during a meal to make expectations such as waiting for a turn, caring for shared spaces, and avoiding waste explicit. The reviewed sources, however, do not verify that such talk changes independence or moral development.

Family collaboration and responsiveness to individual differences. The final category brings together evidence on home influences and children's differing starting points. Sabourin-Guardo et al. (2024) examined longitudinal associations between the quality of family interactions and children's narrative abilities under financial insecurity, and Silva and Cain (2024) examined how home literacy, vocabulary, and grammar contribute to narrative production and comprehension. Intervention studies involved parents or families directly, for example by teaching parents specific techniques for shared storybook reading (Requa et al., 2022) or by adding home visits to a shared reading intervention for children from low-SES and ethnic minority families (Dias-Broens & van Steensel, 2023); another study addressed learning apps used at home to prepare children for school (Niklas et al., 2025). Other studies emphasize that children's cognitive characteristics and environments differ (Amland et al., 2025; Bakker et al., 2023; De Vita et al., 2022; Gashaj et al., 2023), and Cusiter et al. (2025) reviewed combined, multi-component interventions for at-risk preschool children. These sources support treating family communication and individual responsiveness as parts of MBG implementation, but they do not show how teachers or families should respond to eating difficulties or other specific mealtime challenges.

Factors Associated With Strategy Implementation

The literature points to several factors relevant to the implementation of independence-building practices. At the teacher level, studies of teacher-implemented programs describe structured intervention programs, teacher training, and monitoring tools such as intervention checklists. August et al. (2024) evaluated an interactive read-aloud intervention for three-year-old dual-language learners delivered by trained teachers, Lacin (2023) examined a 12-week teacher-implemented shared-reading intervention in four preschool classes, and Riad et al. (2024) tested dialogic reading under pragmatic, real-world conditions in preschool with additional language learners. Together, these sources provide a basis for examining teachers' preparation and their capacity to adapt activities to children's needs.

Time and intensity are also relevant to MBG, where teaching and program management responsibilities compete for time. Chatzaki et al. (2026) found that even a four-session intervention led to more progression than no intervention, with a tendency toward more progression after six sessions, whereas Xing et al. (2025) reported larger effects for interventions lasting 17 weeks or more ($g = 0.644$) than for those lasting 8 weeks or less ($g = 0.267$). Short, well-structured activities may therefore be feasible within crowded schedules, while sustained repetition is likely to matter for lasting change. At the environmental level, Read et al. (2023) discuss the challenge that screen-mediated shared reading poses for children's learning and engagement, which suggests that teachers should consider how competing stimuli affect engagement during meals. Finally, the family-related studies cited above (Dias-Broens & van Steensel, 2023; Requa et al., 2022; Sabourin-Guardo et al., 2024) indicate that home conditions and parental involvement shape children's outcomes. The available sources do not establish the

relative influence of infrastructure, teacher workload, parental involvement, or institutional support on MBG outcomes. These factors should be reported as confirmed findings only if studies that examine MBG directly provide supporting evidence.

Summary of the Results and Evidence Gaps

The reviewed sources offer complementary perspectives on adult guidance, participatory and peer-supported activities, guided talk, and family collaboration. Skene et al. (2022) show that the effects of guidance vary across outcomes, cautioning against assuming that every guided activity produces the same developmental benefits. Chatzaki et al. (2026) and Xing et al. (2025) indicate that both the number of sessions and the duration of structured activity may matter. Studies of teacher-implemented and family-involving programs (August et al., 2024; Dias-Broens & van Steensel, 2023; Lacin, 2023; Requa et al., 2022; Riad et al., 2024) illustrate how structured activities can be delivered through teachers and extended to the home.

The main evidence gap is the absence of direct evidence about teacher strategies implemented through Indonesia's MBG program: none of the 25 reviewed sources examines MBG, school meals, or mealtime independence. The available records therefore do not establish whether the four analytical categories consistently occur in MBG settings or whether they produce measurable improvements in children's independence. Moreover, most sources concern literacy, narrative, or mathematics outcomes, which limits their transferability to mealtimes and to Indonesian early childhood settings. This is a limitation of the evidence currently available for synthesis, not proof that no such research exists. Establishing these conclusions requires studies that observe mealtime routines under MBG and measure children's self-help skills, responsibility, and participation.

Discussion

The findings of this review highlight the potential role of teachers in integrating independence development into everyday mealtime activities within the Free Nutritious Meal Program (MBG). This perspective is consistent with evidence that adult guidance combined with child agency can support learning (Skene et al., 2022) and that developmental goals can be pursued within short, playful, structured activities (Berner et al., 2024; Chatzaki et al., 2026). However, the present review extends these perspectives by examining mealtimes as a context for independence-building activities. This distinction is important because nutritional provision and pedagogical development represent related but different objectives. The findings suggest that the educational value of MBG depends partly on how teachers organize children's participation in daily routines. Nevertheless, direct evidence that MBG implementation improves independence remains insufficiently established in the available literature.

Structured habituation and routines emerged as an important category for understanding how mealtimes may support children's independence. Repeated opportunities to perform age-appropriate tasks can allow children to practice self-help skills and assume increasing responsibility. This interpretation is consistent with the sequenced, gradually changing demands used in guided and play-integrated interventions (Berner et al., 2024; Skene et al., 2022) and with work on moving children from comprehension to production (Vretudaki, 2022). The number of sessions also appears relevant: Chatzaki et al. (2026) found benefits after only four sessions and a

tendency toward larger benefits after six, which suggests that brief routines can be worthwhile even when time is limited. However, the available literature does not establish that routine-based activities produce identical outcomes for all children or educational settings. Cognitive characteristics and home learning environments differ across children (Bakker et al., 2023; De Vita et al., 2022; Gashaj et al., 2023), and so do their opportunities for participation. Accordingly, routines should not be understood merely as procedures for maintaining order. Their pedagogical value lies in providing meaningful opportunities for children to act independently, with assistance adjusted to their developmental readiness. Further empirical research is needed to assess these processes specifically within MBG settings.

Active participation provides another perspective on the relationship between mealtime activity and independence. The reviewed studies suggest that children benefit when they act rather than only listen, for example through embodied action during dialogic reading (Wall et al., 2022) and through collaborative small-group play with an adult facilitator (Chatzaki et al., 2026). The meta-analysis by Xing et al. (2025) further suggests that peer interaction may be particularly valuable, whereas teacher-led interaction showed a smaller effect. These sources are consistent with the present review's emphasis on active participation rather than passive receipt of meals. Nevertheless, they concern reading and number activities, and their designs do not establish causal effects on independence. Furthermore, participation must remain developmentally appropriate and inclusive. Children differ in language background and needs (Lipner et al., 2024; Riad et al., 2024), and some may require additional assistance with utensils, food containers, or particular eating tasks. The contribution of participatory approaches therefore lies in their potential to create structured opportunities for practicing independence, rather than in an assumption that peer or hands-on participation automatically improves every developmental outcome.

The integration of character education into mealtime routines broadens the analysis beyond physical self-help skills. Activities such as waiting for one's turn, respecting others, caring for shared spaces, and avoiding unnecessary food waste can provide opportunities to practice responsibility and social awareness. Narrative and dialogic work suggests one way to make such expectations explicit: Özcan (2026) found a positive effect of dialogic reading on preschoolers' narrative skills, and Vretudaki et al. (2023) and Vretudaki and Tafa (2022) examined retelling and narrative interventions in early childhood. Bouizegarene et al. (2024) also describe narrative as serving social as well as cognitive functions. Teachers could therefore use brief conversations, questions, and retelling to help children understand and recount the expected sequence of a meal and the reasons behind it. However, the reviewed sources focus primarily on language, literacy, and numeracy outcomes, and they do not establish that specific mealtime rituals, including prayer or particular etiquette practices, independently cause improvements in children's moral development. Such practices should therefore be understood within their cultural and educational contexts. Teachers can support meaningful learning by explaining expectations, modeling appropriate behavior, and encouraging children to participate. The distinction between teaching observable behaviors and demonstrating lasting character development remains important when interpreting the educational contribution of MBG.

The effectiveness of these strategies may depend on teacher preparation, the intensity of the activities, and collaboration between schools and families. Studies of teacher-implemented programs involved structured programs, trained teachers, or monitoring tools (August et al., 2024; Lacin, 2023; Riad et al., 2024), which suggests that MBG-related strategies would also need professional development and clear guidance. Family-involving studies (Dias-Broens & van Steensel, 2023; Niklas et al., 2025; Requa et al., 2022) and evidence on family interaction quality (Sabourin-Guardo et al., 2024; Silva & Cain, 2024) support the importance of home-school consistency, including for children from lower-income or minority families. Skene et al. (2022) also found that the effects of guided play varied across developmental outcomes, illustrating why educational strategies should not be assumed to produce uniform benefits. Applied to MBG, this comparison suggests that teachers need to balance guidance with opportunities for independent action. Evidence on duration is mixed: Xing et al. (2025) found larger effects for longer interventions, whereas Chatzaki et al. (2026) found that shorter ones can still be effective. Read et al. (2023) further caution that screen-mediated activities can affect children's engagement. Adequate facilities, realistic time allocation, and institutional support may also matter, but their specific effects on MBG implementation require direct investigation. Claims about teacher workload or infrastructure as decisive factors should remain provisional until supported by studies that examine MBG directly.

The principal contribution of this review is its conceptual integration of nutrition-related routines, teacher guidance, and early childhood independence. Previous literature has examined guided play, play-integrated learning, narrative and dialogic interaction, cognitive foundations, and family involvement from different perspectives (Amland et al., 2025; Cusiter et al., 2025; Özcan, 2026; Skene et al., 2022; Xing et al., 2025). The present review brings these perspectives together to examine their relevance to MBG as an educational setting. Its novelty therefore lies in the proposed synthesis of related pedagogical dimensions, rather than in claiming the discovery of entirely new teaching strategies or proven program effects. This integrated perspective offers a framework for distinguishing nutritional objectives from opportunities for learning self-help skills, responsibility, and social participation. However, the framework should be treated as a basis for further investigation until studies directly evaluating independence development through MBG are conducted and systematically reviewed.

These findings have practical implications for early childhood educators and program administrators. Teachers may consider incorporating developmentally appropriate routines, opportunities for active participation, and consistent guidance into mealtime activities. Professional development could help teachers distinguish between completing tasks for children and supporting children to perform tasks themselves, drawing on examples of teacher-implemented programs that combine training with structured materials (August et al., 2024; Lacin, 2023). Schools may also review their mealtime arrangements and strengthen communication with families to promote consistency between home and school practices. At the policy level, MBG implementation could benefit from evaluation criteria that consider both nutritional delivery and the quality of children's participation in mealtime activities. Nevertheless, these recommendations represent implications derived from the literature synthesis, not interventions whose effectiveness has already been established for MBG. Future empirical studies should examine changes in children's self-help skills, responsibility, and participation, while documenting contextual factors and implementation challenges. Such evidence would help determine which strategies are effective, for whom, and under what conditions.

CONCLUSION

This study highlights the potential of the Free Nutritious Meal Program (MBG) to support early childhood independence when mealtime activities are intentionally integrated with educational practices. The key lesson is that structured routines with graduated assistance, active and peer-supported participation, guided talk that frames expected behavior, and family collaboration with responsiveness to individual differences can provide opportunities for children to develop self-help skills, responsibility, and social participation. The implications of the findings emphasize the importance of strengthening teachers' pedagogical preparation, providing supportive mealtime environments, and fostering collaboration between schools and families. The study contributes to early childhood education scholarship by integrating perspectives on guided learning, teacher implementation, and family involvement into a conceptual framework relevant to nutrition programs. However, the findings must be interpreted cautiously because none of the 25 reviewed sources examined MBG or mealtimes directly, so the evidence on the effectiveness of these strategies within MBG implementation is indirect. Differences in study designs and the reliance on literacy, narrative, and numeracy studies may also limit the generalizability of the synthesis. Future research should employ longitudinal and comparative empirical designs to examine changes in children's independence, identify contextual influences, and evaluate the effectiveness of specific teacher strategies across diverse early childhood settings.

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