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Annotated Bibliography on Food-Assisted Education

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Introduction

Food Assisted Education (FAE) is a long-standing approach to improving both nutritional and education outcomes in developing countries. FAE is most often delivered in the form of breakfasts or lunches given to the most impoverished children in selected schools. It is seen as a way to improve nutritional and caloric intake while also boosting school enrollment, attendance, and cognitive performance rates.

However, the effectiveness of FAE interventions has recently come into question. The research base on the impact of FAE is extensive and diverse. Some researchers contend that FAE has no impact on nutritional levels, while others disagree. Other researchers prove that FAE has positive effects on school attendance and cognitive performance, while others disagree about the long-term nature of those effects.

This annotated bibliography lists key documents in the FAE research base. Where possible, brief summaries of the reports are provided.

Key Documents on Food Assisted Education

1. **Ahmed, A. and K. Billah. 1994. "Food for Education Program in Bangladesh: An Early Assessment." Dhaka: Bangladesh Food Policy Project, International Food Policy Research Institute.**

   This document provides an assessment of the pilot phase of the Food for Education (FFE) program in Bangladesh. The FFE project was launched by the Government of Bangladesh on a pilot basis in 1993, with the goal of linking vulnerable group income supplements to primary school enrollment of children. The objectives of the program were to increase school enrollment, promote school attendance, and prevent dropouts.

   The assessment demonstrated strong results for the FFE program. Enrollment in schools with the FFE program increased by 20 percent. Attendance rates for boys and girls increased, and were higher in FFE schools than in non-FFE schools.

2. **Ahmed, Akhtar and Carlo del Ninno. 2002. "The Food for Education Program in Bangladesh: An Evaluation of its Impact on Educational Attainment and Food Security." Washington, DC: International Food Policy Research Institute.**

   Ahmed and del Ninno evaluate the Food for Education (FFE) program in Bangladesh, which was started in 1993. The goals of the FFE program were to increase school enrollment, increase attendance, and prevent dropouts. The authors find that the program did meet those goals, and the increase in enrollment was greater for girls than boys. In addition, they found that the program targeted the most impoverished households, though they recommend that a significant number of nonpoor households participate in the program. They conclude that the biggest problem with the education system in Bangladesh is the low quality of education provided.

3. **Advancing Basic Education and Literacy (ABEL) Information Bulletin. June 1992. "School Feeding Programs and Educational Achievement." Washington, DC: Academy for Educational Development.**

   The ABEL bulletin discusses school feeding programs and their impact on student attendance, academic performance, and cognitive development. It highlights several case studies from developing countries, including the Dominican Republic, India, Guatemala, Jamaica, Haiti and Ghana. One key theme observed in the research base is that children who receive nutritional supplements in school have higher attendance rates and improved academic performance rates.

   The bulletin recommends that school feeding programs be designed together with other synergistic interventions to have more impact. It also recommends that school feeding programs have a focus on rural poor households.

4. Babu, S.C. and J.A. Hallam. 1989. "Socioeconomic Impacts of School Feeding Programs: Empirical Evidence from a South Indian Village." *Food Policy*: 58-66.

Babu and Hallam's study evaluates the impact of school feeding programs in Tamil Nadu. Specifically, the study analyzes the impact of school nutrition on children's education. The researchers looked at household income, family consumption and expenditures, information on the number of child participants, quantities of food, and energy/protein intake at school.

Babu and Hallam found that school feeding programs result in increased school attendance rates, reduction in poverty rates, and increased household spending on non-calorie food and non-food items.

5. Behrman, J., P. Sengupta, and P. Todd. 2001. Progressing through PROGRESA: An Impact Assessment of a School Subsidy Experiment. April. University of Pennsylvania and the International Food Policy Research Institute, Washington, D.C.

Behrman, *et al.*'s study of the PROGRESA program in Mexico analyzes its impact on school enrollment and attendance. The PROGRESA program had the goal of improving enrollment and attendance rates in schools through providing incentives for parents to send their children to school. The researchers found that attendance rates increased by 19 percent, dropout rates were reduced, and children were more likely to progress between grades on time.

6. Behrman, J., P. Sengupta, and P. Todd. 2000. The Impact of PROGRESA on Achievement Test Scores in the First Year. September. International Food Policy Research Institute, Washington, D.C.

Behrman, *et al.* analyze the impact of a school feeding program in Mexico on achievement test scores. They find that the PROGRESA program did improve enrollment and attendance rates during the first year of implementation. However, the results show that the school feeding and incentive program had no significant positive effect on achievement test scores.

7. Benbow, Jane and Dana Russotto. 1999. "Food Assisted Education and Household Livelihood Security: A Background Paper." Atlanta, GA: CARE USA.

Benbow and Russotto summarize the linkages between food assisted education (FAE) and household livelihood security. They make recommendations for addressing the quality of education through FAE projects.

Benbow and Russotto make the case for community involvement in FAE programs, to increase sustainability of the interventions and systemically improve the quality of education. They recommend that CARE target the most food-insecure regions and communities and that micro-nutritional and health interventions be selected that provide the most impact to the targeted population. Girls should be given particular emphasis in the design and implementation of FAE projects. Educational outcomes also must be given as much importance as nutrition and health outcomes.

8. **Bergeron, Gilles, and Joy Miller Del Rosso. 2001. "Food for Education Indicator Guide." Washington DC: Food And Nutrition Technical Assistance Project, AED.**

9. **Catholic Relief Services. 2002. "CRS Approach to Food Assisted Education: A Programmatic Approach in Support of Food Security." Baltimore: Catholic Relief Services.**

   Catholic Relief Services (CRS) provides an overview to its new strategic approach to food assisted education. The strategy is based on six best practices in food assisted education programming: 1) facilitating community-based work, 2) increasing impact through school health interventions, 3) providing complementary inputs to address education quality, 4) targeting the food insecure, 5) creating an enabling environment, and 6) ensuring effective monitoring and evaluation systems.

10. **Chandler, Ann-Marie K, S.P. Walker, K. Connolly, and S.M. Grantham-McGregor. 1995. "School Breakfast Improves Verbal Fluency in Undernourished Jamaican Children." *American Institute of Nutrition* 894-900.**

    Chandler, *et al.* analyze the short-term effects of breakfast on cognitive performance of malnourished children with that of children of normal nutritional status. Cognitive performance is assessed through the administration of four tests after the breakfast meal. The assessments test verbal fluency, visual search, digit span, and speed information processing.

    The researchers find that after receiving breakfast, undernourished children performed significantly better on a test of verbal fluency. However, the performance of children with a normal nutritional status did not change significantly after receiving breakfast.

    The researchers suggest that meals available in schools through feeding programs be targeted to undernourished children.

11. **Chambers, C.M. 1991. "An Evaluation of the World Food Program/Jamaica 2727 School Feeding Program." *Cajanus* 24(2): 91-101.**

    Chambers evaluates the Government of Jamaica and World Food Program school feeding program, which was begun in 1984. Through this program, 95,000 children received a snack at lunchtime. Chambers assesses the impact of the school feeding program on attendance, dietary needs, and source of income transfer.

    The study shows that that the school feeding program did not have significant effects on school attendance. However, the snacks were effectively meeting children's dietary needs and showed effectiveness on income transfer.

12. **Clay, Daniel C. 1998. "Food Aid Targeting in Ethiopia: A Study of Household Food Insecurity and Food Aid Distributions." Nazareth, Ethiopia: USAID.**

13. **Connell, David F., Ralph R. Turner, and Elaine F. Mason. 1985. "Summary of Findings of the School Health Education Evaluation: Health Promotion Effectiveness, Implementation, and Costs." *Journal of School Health* 55:316-21.**

14. **Dall'Aqua, F.M. 1991. "Economic Adjustment and Nutrition Policies: Evaluation of a School Lunch Programme in Brazil." *Food and Nutrition Bulletin* 13,3: 202-209.**

    Brazil's school lunch program is its largest nutritional program, and in 1986 reached 25 million children. It was continued in the 1980s amidst a several budget crisis, under the assumption that school feeding is an effective way to improve nutritional status of impoverished families. It targets children from the preschool age to 14 years. This study evaluates the impact of the school feeding program on nutritional levels of low-income households.

    The study shows that nutritional levels, as observed through caloric intake, did increase during the course of the program. In addition, school enrollment increased in schools that offered lunch, demonstrating a positive effect on educational outcomes as well as nutritional.

15. **Del Rosso, Joy M. and Tonia Marek. 1996. "Class Action: Improving School Performance in the Developing World through Better Health and Nutrition." Washington, D.C.: The World Bank.**

    Del Rosso and Marek provide a thorough literature review of the relationship between improved nutrition and school performance. They analyze lessons learned from past school-based nutrition and health programs and make recommendations for the design of such interventions.

    Del Rosso and Marek point to an extensive research base to contend that healthier and better-nourished children have higher enrollment and attendance rates, and perform better than children suffering from malnutrition. They also discuss long-term benefits to the wider community beyond the children fed.

    The authors outline three cost-effective nutrition and health interventions and provide lessons learned for policymakers on successful management of school-based nutrition programs.

16. **Del Rosso, Joy M. 1999. "School Feeding Programs: Improving Effectiveness and Increasing the Benefit to Education." Oxford: The Partnership for Child Development.**

    This guide for program managers aims to address the changing landscape of school feeding programs. For school feeding programs to be successful, the author contends that to improve

effectiveness, school feeding programs must be designed as part of a "package of interventions" that address children's education, health, and nutritional needs.

Del Rosso provides an overview of the research base on school-based approaches to health and nutrition programs and summarizes the benefits of such interventions. In addition, Del Rosso provides seven steps for designing school feeding programs. These recommendations include building consensus on objectives, focusing on key target populations of high-risk children, identifying funding sources, developing monitoring systems, and integrating school feeding programs with other synergistic interventions.

17. **Devaney, B. and E. Stuart. 1998. "Eating Breakfast: Effects of the School Breakfast Program." Princeton, NJ: Mathematics Policy Research, Inc.**

    Devaney and Stuart analyze the impact of the United States School Breakfast Program. Specifically, they ask whether the provision of food in the morning increases the likelihood that a student will eat breakfast.

    They find that the provision of breakfast food did not increase the likelihood that students would eat breakfast. However, Devaney and Stuart did find that the School Breakfast Program had the most effect for students from low-income households.

18. **Devereuz, Stephen. 1998. "The Impact of WFP Development Assistance: Effective Approaches for Food Aid Interventions." Sussex: Institute of Development Studies.**

19. **Dwyer, J. 1995. "The School Nutrition Dietary Assessment Survey."** ***American Journal of Clinical Nutrition*** **61: 173S-7S.**

    Dwyer provides an overview of United States interventions in school nutrition, spanning from the first program in the 19th century to recent programs. Dwyer also analyzes "The School Nutrition Dietary Assessment Study." School nutrition programs have a large reach in the United States. Ten percent of school-age children receive two out of their three daily meals in school.

    While the study successfully affected policymaking, Dwyer recommends that other school nutrition interventions—including health education, parent involvement, and health services—be analyzed further.

20. **Florencio, C.A. 1987. "Impact of Nutrition on the Academic Achievement and Other School-Related Behaviors of Grade One through Six Pupils." Manila: University of the Philippines.**

21. Gervais, Suzanne, Judy Bryson, and Karen Freudenberger. 2003. "Africare Field Manual on the Design, Implementation, Monitoring, and Evaluation of Food Security Activities." Washington, DC: Africare.

This guidebook provides an overview of the design, implementation, and monitoring and evaluation of Africare's food security projects. It consists of eight modules. The modules summarize project activities and gives suggestions for monitoring empowerment and capacity building activities. They provide a detailed introduction into the design of the development assistance plan and the monitoring and evaluation plan. In addition, the manual extensively details participatory rural appraisal rapid rural appraisal techniques. It concludes with an overview of a DAP Information System.

22. Glewwe, Paul and Hanan Jacoby. 1994. "An Economic Analysis of Delayed Primary School Enrollment and Childhood Nutrition in Ghana." LSMS Working Paper 98. Washington, D.C.: The World Bank.

Glewwe and Jacoby analyze the relationship between school enrollment and childhood nutrition in Ghana. They find that malnourished children start school later and complete fewer years of school as compared to better nourished children.

23. Gopaldas, Tara, and Sunder Gujral. 1996. "The Pre-Post Impact Evaluation of the Improved Mid-Day-Meal Programme, Gujurat." Baroda, India: Tara Consultancy Services.

Gopaldas and Gujral provide the results of an evaluation of a school feeding project in Gujurat, India. Six thousand children received daily meals in school. The study consisted of a baseline evaluation of nutritional levels, and a post-project evaluation of nutritional levels. The authors found that the prevalence of parasitic infection in the children was reduced, hemoglobin status improved, and vitamin A deficiency declined.

24. Grantham-McGregor, Sally. 1998. "Evaluation of School Feeding Programs: Some Jamaican Examples." *American Journal of Clinical Nutrition* 67: 785S-9S.

Grantham-McGregor, *et al.* evaluate the impact of breakfast on cognitive function of malnourished and better-nourished children. They found that cognitive function in undernourished children improved after they received breakfast, but cognitive function did not change in better-nourished children. It demonstrates the potential impact of breakfast on the educational performance of malnourished children.

25. Harbison, Ralph W. and Eric A. Hanushek. 1992. "Educational Performance of the Poor: Lessons from Rural Northeast Brazil." New York: Oxford University Press.

Harbison and Hanushek analyze the educational performance of poor children from rural northeast Brazil and find that malnourished children perform 20 percent worse than children who are better nourished. Malnourished children in this region have higher than average dropout rates.

26. Harinaryan, Anuradha, Holly Solberg, and Carrie Hubbell. 2000. "Best Practices: Review of NGOs in the Use of Food Resources." Atlanta, GA: CARE USA.

This study provides a review of best practices in the use of food resources. It consisted of extensive interviews with leading NGOs who work in food security. Key themes that emerged include the need for more participatory design, monitoring, and evaluation of food security projects, better targeting of food assistance, minimizing harm to local production and markets, and developing sound strategies for transition and end of implementation.

27. Jacoby, Hanon. 1997. "Is there an Intrahousehold Flypaper Effect? Evidence from a School Feeding Program." Food Consumption and Nutrition Division Discussion Paper No. 31. Washington, DC: International Food Policy Research Institute.

Jacoby analyzes a school feeding program in the Philippines to test the "flypaper effect." The "flypaper effect" is the assertion that if a child receives additional benefits, i.e. food, those benefits remain with the child rather than being shared with other members of the household. Jacoby analyzed the data to determine whether a child's caloric intake would indeed increase through school feeding programs. After rigorous analysis, Jacoby concludes that the benefits of school feeding programs do indeed remain with the children, and there is no significant reallocation of calories within the household.

28. Janke, Cornelia. 1996. "SFPs and Education: Establishing the Context." Baltimore, MD: Catholic Relief Services.

This document provides an overview of the research base on school feeding programs. The author explores the impact of school feeding programs on enrollment and attendance rates and looks at the potential for affecting learning achievement. Janke concludes the document by recommending best practices, including the need to providing complementary health, education, and nutrition interventions, such as addressing curriculum, teaching, and infrastructure needs.

29. Levinger, Beryl. 1996. "How to Design a Monitoring and Evaluation System to Improve the Quality of CRS-Sponsored School Feeding Interventions." Catholic Relief Services School Feeding/Education Guidebook.

Levinger outlines the design process of a holistic monitoring and evaluation system to improve school feeding programs. The guidebook provides tools to improve data collection, selection of indicators, and design of questionnaires. Levinger also recommends methods of improving monitoring and evaluation programs, including the use of highly qualified development experts to provide technical assistance, and to make the question of a study conceptually clear.

30. Levinger, Beryl. 1986. "School Feeding Programs in Developing Countries: An Analysis of Actual and Potential Impact." USAID Evaluation Special Study Number 30. Washington, DC: United States Agency for International Development.

Levinger's study evaluates empirical data on the relationships among school feeding programs and school attendance, enrollment, and cognitive performance. Based on the results, Levinger recommends areas for improvement in the design and management of school feeding programs.

Levinger finds that impact on enrollment and attendance depends upon the design of the school feeding program. Based on 22 case studies, the author concludes that school feeding increases enrollment and attendance when programs are designed with the local context in mind and when parents understand the program. In addition, the study finds that attendance improves the most when school feeding programs target the poorest households. However, attendance rates do not necessarily increase when meals are provided in areas of conflict. Levinger also finds that there is inconclusive evidence to link school feeding with improved cognitive performance.

In conclusion, the author states that the most successful school feeding programs involve community members in planning and management and foster local production of the meals.

31. Lopez, I., C.G. de Andraca, E. Perales, M. Heresi, M. Castillo, and M. Colombo. 1993. "Breakfast Omission and Cognitive Performance of Normal, Wasted, and Stunted Schoolchildren." ***European Journal of Clinical Nutrition*****. 47: 533-542.**

Lopez, *et al.* analyze the effect of a lack of breakfast food on cognitive performance of fourth through sixth graders in Santiago, Chile. The cognitive tests assessed memory, attention, and performance. The students were divided into two groups. One group was fed breakfast, while the other group was tested before eating breakfast. The study did not show a significant relationship between food and cognitive performance, though the cognitive performance of stunted children was lower than that of children of normal and malnourished nutritional status. Children of malnourished status did not display significant effects of eating breakfast versus fasting.

32. Mathews, R. 1996. "Importance of Breakfast to Cognitive Performance and Health." ***Perspectives in Applied Nutrition*** **3,3: 204-212.**

Mathews summarizes recent research that explores the relationship between morning meals and cognitive performance. The research base shows that a morning meal is strongly related to improved learning, memory, and physical health of children. The researchers conclude that provision of breakfast is a successful public health intervention that improves the internal efficiency of education systems.

33. McClelland, Donald. 1998. "U.S. Food Aid and Sustainable Development: Forty Years of Experience." Washington, DC: USAID.

34. Morley, Samuel and David Coady. 2003. "From Social Assistance to Social Development: Targeted Education Subsidies in Developing Countries." Washington, DC: Center for Global Development and International Food Policy Research Institute.

Morley and Coady review the extensive literature on social safety nets, including food assisted education. They highlight case studies in Mexico, Nicaragua, Bangladesh, and Brazil and highlight lessons learned. Morley and Coady explore the cost effectiveness of such programs and conclude that food assisted education programs have advantages due to the dual nature of their work. FAE programs work concurrently to reduce poverty and improve educational outcomes.

35. Moock, Peter R. and Joanne Leslie. 1986. "Childhood Malnutrition and Schooling in the Terai Region of Nepal." ***Journal of Development Economics*** **20: 33-52.**

In their study of child malnutrition and educational achievement in the Terai region of Nepal, Moock, and Leslie find that malnourished children are only 5 percent likely to attend school. Better nourished children have a 27 percent likelihood of attending school.

36. Moore, Emily. 1994. "Evaluation of the Burkina Faso School Feeding Program." Baltimore, MD: Catholic Relief Services.

Moore's evaluation of Catholic Relief Services' school feeding program in Burkina Faso finds that the presence of a school canteen was related to increased enrollment, regular attendance, decreased dropout rates, and increased scores on national exams.

37. Ngay, Aben. 2002. "CARE's New Food Policy: Implications for BGE Programming." Atlanta, GA: CARE USA.

This paper analyzes CARE USA's new food policy and discusses its implications for CARE's basic and girls' education program work. Ngay emphasizes the importance to address health, nutrition, and educational quality issues in food assisted education programs. The emphasis on educational quality is necessary to achieve the long-term goals of higher literacy and numeracy skills. Ngay also stresses the need to target the most vulnerable and disenfranchised populations in FAE programs. Lastly, the report provides suggestions for monitoring and evaluation of FAE programs.

38. Pollitt, Ernesto, K. Gorman, E. Engle, R. Martorell, and J. Rivera. 1993. "Early Supplementary Feeding and Cognition: Effects over Two Decades." Society for Research in Child Development, Monograph 235. Chicago: University of Chicago Press.

Pollitt, *et al.*'s study of the effects of school feeding programs indicate that in Guatemala children with better nutritional status are more likely to have higher cognitive test scores and better school performance than malnourished children.

39. Powell, Christine, et al. 1998. "Nutrition and education: a randomized trial of the effects of breakfast in rural primary school children." *American Journal of Clinical Nutrition* 68: 873-9.

40. Rajan, S.I. and A. Jayakumar. 1992. "Impact of the Noon Meal Programme on Primary Education: An Exploratory Study in Tamil Nadu." *Economic and Political Weekly* 2372-2380.

Rajan and Jayakumar provide an analysis of the school lunch program provided to school children in Tamil Nadu, India, during the early 1980s. The authors analyze the impact of the provision of school meals on enrollment, attendance, and dropout rates.

The results show that enrollment and attendance rates did improve in schools with the Noon Meal program. The dropout rate decreased from 40 percent to 22 percent. In addition, the Noon Meal program disproportionately improved the enrollment rates of children in the lowest socioeconomic groups, including Muslim and other backward classes.

41. Ravillion, M. and M. Wodon. 2000. "Does Child Labor Displace Schooling? Evidence on Behavioral Responses to an Enrollment Study." *The Economic Journal* 110:158-175.

Ravillion and Wodon attempt to determine whether providing incentives in the form of subsidies to increase school enrollment displaces the need for children to work. They explore the situation in Bangladesh through its Food for Education (FFE) program. In the FFE program, families received month food rations in exchange for sending their children to school. To receive the food rations, children had to maintain an 85 percent attendance rate.

Ravillion and Wodon found that FFE was responsible for a small proportion of the increase in school enrollment rates, but not all. They conclude that parents substitute other uses of their children's time.

42. Rogers, B.L., T.G. Sanghvi, P. Tatian, J. Behrman, M. Calderon, S. Crelia, M. Garcia. Unpublished. "Food and Income Subsidies and Primary Schooling in Rural Honduras: An Evaluation of the Impact of the Bonos (BMJF) and PL480 Title II School Feeding Programs." Washington, DC: Latin America and Caribbean Healht and Nutrition Sustainability, USAID.

Rogers, *et al.* analyze the impact of the Title II program on enrollment, repetition, attendance, and achievement scores. They find that school feeding programs increased the average rate of academic progress through primary school. However, the school feeding program did not have a significant effect on enrollment. Attendance rates increased, as did the students' nutritional intake. The study also found that the programs reached a higher percentage of rural children than urban children.

43. Sanghvi, T.G., and E.C. Moore. 1997. "Nutritional Supplementation of School Children: Nutrition, Health, and Income to Support Primary Education." USAID Opportunities for Micronutrient Interventions (OMNI) Project.

Sanghvi and Moore synthesize experiences from food assisted education projects. They highlight projects from India, Honduras, Burkina Faso, and Chile to support their conclusions. They recommend improving food assisted education programs by streamlining management and logistics and focusing on cost recovery. The authors also highlight the need to deliver food/micronutrients at a time that has the most effect on learning and performance.

44. Serageldin, M., M. Ismail, and Pierre Landel-Mills. 1994. "Food Coupons Project: Honduras." *Environmentally Sustainable Development Proceedings Series No. 3: Overcoming Global Hunger*, pp. 184-186. Washington, DC: The World Bank.

This study provides an overview and evaluation of the Food Coupons Project in Honduras. The Food Coupons Project administered coupons three times a year to families if their children attended school. The coupons covered nearly 20 percent of an individual's food needs and were redeemed at local shops or private banks. The evaluation of the project concluded that it was cost-effective and resulted on a 12 percent increase in primary school enrollment.

45. Schultz, T. P. 2001. School Subsidies for the Poor: Evaluating the Mexican PROGRESA Poverty Program. August. Yale University Economic Growth Center, New Haven, CT.

46. Schultz, T. P. 2000. School Subsidies for the Poor: Evaluating a Mexican Strategy for Reducing Poverty. June. International Food Policy Research Institute, Washington, D.C.

47. Smith, N. and J. Mason, eds. 2000. "Country Case Studies: A Review of CARE's Use of Title II Resources in Ten Countries." New Orleans, Louisiana: Tulane University School of Public Health and Tropical Medicine.

This document provides an overview and analysis of CARE's Title II programming in ten countries. It uses a broader lens of food-related work, not limited to education but also including food for work and maternal and child health interventions. The case studies also analyze policy issues, including CARE's competitive advantage and impact.

48. Smucker, Glenn and Nina Schlossman, eds. 2001. "Evaluation Report of the Enhanced Food Security II Program, USAID Haiti Mission." Arlington, VA: John Snow, Inc.

This report provides an exhaustive evaluation of the Title II program in Haiti. The researchers evaluated food security projects implemented by CARE, CRS, and World Vision. The components of the program include school feeding, maternal and child health, food-for-work projects, social safety net projects, and income generating activities. In terms of the school feeding component, the researchers find that the school feeding programs did not have impact on educational performance. They identify the low quality of schooling as the biggest obstacle in Haiti's education system and suggested that future food for education programs address quality issues more systemically.

49. Walter, T., E. Hertrampf, F. Pizarro, M. Olivares, S. Llaguno, A. Letelier, V. Vega, and A. Siekel. 1993. "Effect of Bovine-Hemoglobin-Fortified Cookies on Iron Status of Schoolchildren: A Nationwide Program in Chile." *American Journal of Clinical Nutrition* 57: 190-4.

Walter, *et al*. analyze the impact of a school nutrition program in Chile. Fortified cookies were distributed daily to children for three years. The authors found that the cookies were extremely effective at improving iron levels in undernourished children.

50. World Food Programme. 1995. "Thematic Evaluation of Long Term School Canteen Projects in West Africa." WFP: Office of Evaluation.

The World Food Programme (WFP) evaluates school canteen projects in West Africa for their impact on educational indicators. Based on the results, WFP makes recommendations for future FAE programming.

They found that enrollment rates increased through the school feeding programs but that it was difficult to obtain reliable figures for enrollment rates. While overall attendance rates increased, the effect of school feeding programs on the attendance of girls was in question. The evaluation found that school feeding programs were not challenging the larger, more deeply ingrained cultural norms that impede girls from going to school. Lastly, the evaluation found that achievement scores increased when the daily meal was provided at key times of day.

The WFP made the following recommendations: firstly, the objective of increasing enrollment rates should not be a part of WFP programs because of the difficulty in monitoring it. Secondly, monitoring and evaluation mechanisms must be improved. Lastly, to improve sustainability, the WFP should be clear about assistance being phased out so that communities can prepare exit strategies.

51. World Food Programme. 1995. "Operational Guidelines for WFP Assistance to Education." WFP Document SCP15/INF/3.

This document provides an overview to WFP and UNESCO's guidelines for food assisted education projects. The paper provides an overview to food assisted education and the research base that supports such initiatives. It then recommends policy and procedural guidelines for project design.

The authors find that school feeding programs have a positive impact on attendance, enrollment, and reduction of dropout rates. The programs have been most successful in the most impoverished communities. The authors recommend that school feeding programs not be administered in isolation. To enhance effectiveness, they must be provided along with other education, nutrition, and health interventions.

Lastly, the report provides recommendations for improving commitment from governments, sustainability, community participation, monitoring and evaluation, and food distribution.

52. World Food Programme. 1993. "Evaluation of the World Food Program: Final Report." Chapters 6.0, 6.3, and 6.3.2.

This report provides several chapters that evaluate the World Food Programme's global efforts in school feeding. The study finds that few evaluations of WFP school feeding projects show improved nutritional status in participating students. In addition, the study points to inconclusive evidence on the impact of school feeding projects on attendance rates. The WFP has found that implementation of such programs is difficult, as is the development of a sound exit strategy.

The study provides a case study of an innovative project in Mexico, where achievement scores, attendance, and enrollment improved. The government in Mexico was committed to the project, which ensured sustainability.

53. World Food Programme. 2003. "Global School Feeding Report." Washington DC: April 2003.

The World Food Program (WFP) uses food for education to improve child welfare around the world. Over the last year, school feeding programs have become a pathway to the implementation of other health and education programs. The Global School Feeding Report indicates how the WFP adjusts and adapts to an ever-changing environment. The report covers a wide variety of activities, including monitoring and evaluation mechanisms as well and sound exit strategies.

54. USAID. "Concept Plan for its Strategic Plan for 2004-2008." 2003. Washington, DC: Office of Food for Peace. Bureau for Democracy, Conflict and Humanitarian Assistance.

This concept paper outlines the newly adopted strategic plan for the Office of Food for Peace (FFP). The new strategy will focus on reducing food insecurity in vulnerable regions during both emergency and non-emergency situations. Several trends are noted as causing the need for strategic reform such as the prevalence of disasters, the HIV/AIDS epidemic, the growth of the urban poor, and the decline in international food aid from developed nations.

Due to this changing environment, FFP developed a new conceptual framework with a greater focus on reducing food insecurity through reducing the vulnerability and risk with which many communities live.