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# Beyond Policy to Practice: Interface between School Feeding and Effective Early Childhood Instruction: Ghana's Experience

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#### Abstract:

This study is a descriptive research of the phenomenological approach where focus group discussion was used as an instrument to elicit perspectives of eight early childhood educators selected from early childhood centres benefiting from the Ghana school feeding program within the Winneba municipality on how they made connections between school feeding and instruction. The study was informed by a government of Ghana policy requiring connections between instruction and the Ghana school feeding program in the classroom. Guided by three research questions, the study revealed participants' naivety of any existing policy ion the area of school feeding -instructional connection, and also participation by educators in the program was "need be" basis. These notwithstanding, early childhood educators involved in the study were positive of the contribution of the Ghana school feeding program to pupils' enrolment and attendance to schools. The study made a number of recommendations regarding making connections between school feeding and instruction of which included; the sourcing of the Government of Ghana's policy on the relationship between school feeding and instruction by early childhood educators and positing themselves in the realization of this policy. Again, it was the recommendation of the study that an important policy such as school feeding should necessarily be incorporated in the curricula of early childhood education, and early childhood teacher training hence, steps must be taken in that direction.

Keywords: Early childhood education, instruction, school feeding, interface.

#### 1. Introduction

The government of Ghana in line with the attainment of the Millennium Development Goals (Ghana, 2006) issued an Education Strategic Plan (ESP, 2003-2015) with focal areas being access, quality, and management of education as main policy drivers of Ghana's developmental aspirations. Within the ambit of this developmental aspiration is early childhood education; a sector described to be foundational to the educational development of countries (UNESCO, 2006). Indeed, the role and place of early childhood education as expressed by UNESCO is adhered to by the government and people of Ghana in making early childhood education an integral part of the Ghanaian educational program.

Pre-school as a concept is argued to date back to pre-independence Ghana. Abdulai (2013) citing Asemanyi and Wunku (2007) stipulate that early programmers for the care and education of young children can be dated to the middle 1940's. According to the authors, the first nursery unit established in colonial Ghana was under the auspices of the Ministry of Education, Private and Voluntary Organizations, the Department of Social Welfare and Community Development agencies operating programs for the care and education of young children. Ghana's Constitution (1992) does accord education a high priority. A free Compulsory, Universal Basic Education for all Ghanaian children of school going age is captured in the constitution. Thus, the historical place of early childhood education represented as pre-school in Ghana's history is definitely not in doubt.

The above notwithstanding, it was not until the coming into being of the Education Strategic Plan (ESP; 2003-2015) that early childhood education became part of Ghana's mainstream formal educational setup. This was as a result of a presidential committee recommendation (Anamuah-Mensah Report, 2002) requesting early childhood education to be integrated into the basic educational sector. Thus, early childhood education as practiced in Ghana was formally incorporated into mainstream basic education in the year 2004

During the period of early childhood educational inception into Ghana's formal educational system, the World Food Program had started (in the year 2003) a school feeding program on pilot basis in the Upper Volta region of Ghana. This program was taken over by the Ministry of Education of Ghana in 2005 (Government of Ghana Report, 2006). It is worth stating that early childhood education being an offshoot of the Millennium Development Goals, Ghana's School Feeding Program was also hatched out of the same policy

(Millennium Development Goals). These programs were to complement each other within the context of Ghana's developmental agenda.

With regards to what Ghana's school feeding program aimed to achieve, the UN Millennium Project Task Force (2005) states that the program was premised on four major objectives; to increase school enrolment and attendance, alleviate short term hunger among learners, improve the nutritional and micronutrient status of food provided for learners, and to serve as an avenue for cognitive and intellectual development of learners. School feeding as practiced in Ghana aimed at not only being a pull for school enrolment but also served as a platform for learning. Thus, the Ghana school feeding concept in addition to the numerous goals it hoped to achieve was to serve as a conduit for teaching and learning relative to food production, eating habits, health, and most importantly nutrition. For example, the Ghana School Feeding Operating Plan for the year 2006 do state; that the school feeding program was to strive to provide nutritional education through teaching and learning about balanced diets, hygienic storing of food, and preparation of hygienic foods. Learners understanding and appreciation of the above concepts was in part to be informed by the school feeding program.

Interestingly however, most studies on the subject of school feeding have failed to address the impact of school feeding on learners' intellectual development, and most especially the relationship between school feeding, and teaching and learning. Indeed, studies on the causal impact of school feeding have been significantly scanty. The limited body of research in the area of school feeding-teaching-learning continuum is more profound at the early childhood level in Ghana. Hence, this study as its objectives conducted investigations to determine the extent to which the school feeding program at eight different public primary institutions with early childhood centres in the central region of Ghana do impact teaching and learning at that level.

The objectives of the study were addressed by first eliciting perspectives of early childhood educators of the eight centres of their conceptual understanding of the Ghana school feeding program. Secondly, the study also sought to determine how the Ghana school feeding program impacts learning through a determination of whether conscious efforts on the part of early childhood educators are made to forge a teaching-learning relationship with the school feeding program. And Finally, again based on responses of early childhood educators to determine if the school feeding program has had direct impact on teaching and learning in the classroom. Responses to these questions served as indicators to the success of the school feeding program relative to instruction. Thus, the study attempted to bring to bear the relationship between policy and practice using the Ghana school feeding program and early childhood education as case study.

The early childhood educational sector was deemed appropriate and conducive for this study because quite a number of studies (see; Allen, 2001; Hall, 2007) have argued that since nutritional problems occur in the first years of the child's life-cycle it is necessary that the nutritional needs of children at this stage be improved and one of the means of doing this is through the school feeding program. Worobey &Worobey (1999) collaborates this assertion by stating that early malnutrition and/or deficiencies in micronutrients have been linked to poorer cognitive functioning. There has been a number of studies that have called for the need for adequate nutrition during the first years of the child's life (for example; Martorell, Melgar, Maluccio, Stein, & Rivera, 2010). And since early childhood education is posited as the foundation for every successful educational program, and thus the beginning of developing positive habits and attitudes, then it stands to reason that any program aimed at supplementing the nutritional needs of the child and for that matter positive intellectual development, and positive nutritional habits should start at this level.

This study even though limited in scope is significant because it contributes positively to the discourse of making school feeding an important ingredient for effective educational practices. This contribution is informed by a shift from the discussion of school feeding been a vehicle for school enrolment and attendance to establishing a cod between school feeding programs and teaching and learning. Also informing is the sector chosen for this study; the early childhood educational sector, an area within the educational setup of Ghana described as most critical in the overall successful educational development of the nation.

## 2. Literature Review

The primary focus of this study was to investigate the extent to which Ghana's school feeding program affects teaching and learning at the early childhood level. In this direction, perspectives of early childhood educators of eight beneficiary schools of the Ghana school feeding program were elicited on their conceptual understanding of the school feeding program concept. Again, perspectives of participating early childhood educators in this study were also sought in the direction of the extent to which the school feeding program served as an avenue for teaching and learning at the early childhood level. And finally, from perspectives of early childhood educators how the school feeding program impacts teaching and learning?

In pursuance of this focus, the study found it necessary to review literature on first; the concept of school feeding program by generally looking at what constitutes school feeding, what have been the background, objectives and rationale surrounding Ghana's school feeding program; benefits associated with school feeding, and finally, the case for relating school feeding to teaching and learning.

School feeding according to Atta &Manu (2015) is defined as providing food for school children. Bundy, Burbans, Grosh, Geli, Jukes &Drake (2009) also describe school feeding as the provision of food to school children. Primarily, school feeding program is an intervention where meals are provided to children in school. These meals are to serve as source of motivation for parents to send their children to school, keep them in school, and also to enhance the cognition of beneficiary school children (Uduku, 2011). Ghana is on record to have been the first of 10 countries in sub-Saharan Africa to have implemented a school feeding program. In Ghana, according to Bukari and Hajara (2015) several school feeding programs were already implemented by organizations such as the World Food Program, Catholic Relief Services and the World Vision. However, the formulation of the school feeding program as it exists

started in the year 2004 and the first phase of the program was to run from January 2006 through to December, 2010. Currently, the program is wholly managed and financed by the government of Ghana (Mohammed and Sakara, 2014).

The basic concept of the Ghana school feeding program as espoused by the World Food Program (2004) was to provide children in public primary schools and kindergartens in the poorest areas of Ghana with one hot, nutritious meal per day through the use of locally produced foodstuffs. The long term goal of this program as stated by the World Food Program (2007) was to contribute to poverty reduction and elimination of food insecurity. Ghana's school feeding program was identified to be in a position to help in the realization of the first priority of the Millennium Development Goal (i.e., hunger and poverty reduction).

Advantages associated with school feeding as opined by Bennet (2003), and Hall (2007) can be seen in three major areas; first they both argue that school feeding contributes to the reduction of malnutrition rates, again it contributes to school enrolment and attendance as well as cognitive performance, and thirdly it impacts on demand for locally grown food stuffs. Contributing to the benefits of school feeding relative to nutritional improvement, Tomlinson (2007) argues that school feeding programs addresses nutritional and health needs of children and could have causal effects for improved learning. Tomlinson however is quick to add that school feeding alone cannot affect learning positively without improvement in other factors. For Briggs (2008), when school feeding programs are designed with micronutrients in mind, the author points to their effect on the micronutrient status of children. Unfortunately, with Ghana there has been limited or no studies of any assessments on the effects of school feeding on childhood nutrition particularly at the early childhood level.

Literature on the relationship between school feeding and school enrolment and attendance can be described as positive. In a study on the effects of school feeding on girl enrolment at schools at Madhya Pradesh in India, Afridi (2007) intimates the positive impact of school feeding in school enrolment and attendance. Similarly, studies by Jomaa, McDonnel &Probart (2011) on the effects of school feeding on enrolment and attendance rates conclude that school feeding contributes positively to children enrolment in schools. Accordingly, Buhl (2012) mentions different studies on school feeding in countries like Jamaica, Kenya, Bangladesh, the Philippines, and Uganda which confirm the positive effects of school feeding on school enrolment and attendance. For Del Rosso (1999), food can serve as an incentive for children to attend school on regular basis and this according to the author is profound with girls.

In Ghana, a number of studies such as that by Oduro-Ofori &Adwoa-Yeboah (2014), do confirm increase in enrolment and attendance of pupils at beneficiary schools due to the Ghana school feeding program. Indeed, the effectiveness of the Ghana school feeding program in school enrolment and attendance is attested to by the researchers of this study. Thus, the success of the Ghana school feeding program in the direction of enrolment and attendance partly informed the need for this study in the direction of how the school feeding program impacts teaching and learning.

Aside the above discussed advantages accompanying school feeding, some studies have presented school feeding as a vehicle for effective learning. For example, a World Bank Report (1985) on the efficacy of school feeding on education concludes that the primary assumption of school feeding programs is that education and learning is dependent on good nutrition. Winicki &Jemison (2008) provides further credence to the relationship between hunger and learning by making reference to how that could be detrimental to effective teaching and learning based on a kindergarten classroom experience. Glewwe (2005) points to the effect of child nutrition as a result of school feeding which in turn could affect learning via increased attendance, cognitive development, or academic achievement. Bundyl (2009) reminds us that short term hunger common in children who will not have eaten before going to school do have difficulty in concentration and performing complex tasks in class. In a study on the effects of school meals on student's performance in a London borough, Belot & James (2011) report of improvement in learners' test scores as a result of improvement in the quality of school meals. Definitely, there is enough evidence pointing to the relationship between school feeding and academic performance.

The above notwithstanding, when it comes to establishing a cod between school feeding, and teaching and learning even though different studies have called for such a relationship not many point to the realization of this worthy idea. For example, writing on school feeding program and pupils participation in primary schools in Kenya, Khatete and Oyabi (2013) call for school feeding and school food production to be linked to classroom activities relating to health, home economics, mathematics and agriculture. The Ghana School Feeding Program Document (2007-2010) for example, do stress the need for a balance of nutritional education through teaching and learning.

Some studies such as that by Powell (1998) have articulated the link between learning and school feeding. However, especially in Ghana, most studies have viewed school feeding within the prism of school enrolment and attendance to the neglect of how such programs affect educational outcomes. Hence, what is fed to children in terms of nutritional content is not known to teachers neither is it explained to pupils. Besides, using school meals a said in teaching is usually overlooked. In view of these, this study attempted to determine how the Ghana school feeding program is implemented as a way of improving nutritional status of early childhood learners, and the extent to which a connection is made between instruction, and the school feeding program. By this, the study investigated into evidence of relationship between school feeding as a program, and the extent to which it is used as a module of instruction at the early childhood level.

#### 2.1. Research Questions

Based on the objectives above, the following research questions were set:

• What is early childhood educators conceptual understanding of the Ghana school feeding program in the Winneba municipality?

- To what extent are relationships established between school feeding and instruction at early childhood centres in the Winneba municipality?
- What from the perspectives of early childhood educators in the Winneba municipality is the impact of school feeding on instruction at early childhood centres at the study area?

### 3. Methodology

The study was a qualitative study of the phenomenological approach that elicited views and perspectives of early childhood educators at eight primary schools with early childhood centres and beneficiaries of the Ghana school feeding program in the Winneba municipality of the central region of Ghana.

A purposive sampling approach was used in the selection of participants for the study. In all 8 early childhood educators were selected from eight institutions each selected from an institution. All 8 participants were female. The schools were purposively sampled because they had to meet certain criteria; first they had to be public schools, and also should be beneficiaries of the Ghana government school feeding program. It is important to state that early childhood centres (private and public) within the Winneba municipality is about 40. However, just the eight that participated in this study benefit from the school feeding program. Participation in the study was voluntary and participants were educated on the objectives surrounding the study. It is important to state that for the purpose of anonymity it was agreed that the names of the participating institutions as well as those of participants were concealed. Participants were numbered; thus Educator #1 – Educator #8.

Data collection was done purely through focus group discussions. Discussions were structured in questions and answers format with researchers leading the discussions. These discussions were done over a period of four Saturdays for three hours each. This was because of the difficulty in getting all participants at one place within a certain period. Data analysis was done through transcription of recordings by a transcription expert. Tran-scripted data was then grouped under the research questions that guided the study.

## 4. Results and Findings

Research question one of the study sought to elicit early childhood educators conceptual understanding of the Ghana school feeding program. Addressing this question, group discussions centred on a determination of what constituted the Ghana school feeding program as opined by participants, what again based on participants' perspectives constituted the objective of the program, and finally whether the program based on participants' perspectives is a philanthropic gesture on the part of the Ghanaian government to parents and beneficiaries? Responses regarding these questions were mixed. For instance, below is the description of the programme by a participant:

Educator #1: "I know it is a program introduced by the government, first of all, to feed the pupils so that their interest in school will be sustained. Secondly, it is also to fill up the gap that exist in the nutritional intake of children when it comes to feeding. This is because, most children do not take balance diet in their homes so it is a form of policy that will fill up the gap between the nutritional needs of children. That is my understanding of the school feeding program".

There seemed to be unanimity on the part of participants in describing the Ghana school feeding program as an instrument of attraction for school enrolment and attendance. Some early childhood educators described the program as one for rural schools. For instance, Educator #2 described the program as a way by which the government help children in deprived areas to come to school and learn. Educator #3 said; "it is a form of assisting pupils in school by the government in other to keep them in school". This perspective was shared by Educator #4 who described the program as helping children to be regular and punctual in school. These responses apart from representing how the school feeding program was viewed by participants, also can be described as a reflection of what the Ghana school feeding program sought to accomplish as perceived by participants of this study.

Again, still on research question one, views of participants were solicited on whether the Ghana school feeding program was a right of beneficiaries or a favour on the part of government? Whiles some educators saw the upkeep of children including the feeding of children in schools as parental responsibility, others saw Ghana's free Compulsory Universal Basic Education unachievable without an attractive policy like the school feeding program hence, a right. This is the response of an educator on this subject:

Educator #7: "I understand rights as enshrined in the constitution. Children should have right to shelter, right to clothing, right to food and so forth, and this responsibility should fall on the parents but not the government. So I think it is a favour the government is doing parents and their children".

The above position was viewed differently by other educators as evidenced in the response below:

Educator #8: "I think it is their right. I am saying this because the free Compulsory Universal Basic Education initiative enforces free education, so if the child is ready to be enrolled in school then the government must provide everything for him/her on free basis and that includes food. Hence for me, I do not think this is a favour on the part of the government rather something that must be done to make sure the fCUBE program is realized".

The above notwithstanding, perspectives shared by most educators was in the direction of school feeding being a favour on the part of government for poor and needy children.

Question two of this study sought to determine the extent to which the school feeding program was tied to instruction. Addressing this question, focus group discussion centred on three areas. First the extent of involvement of educators in the school feeding program and how. Two, the extent to which meals provided or the school feeding program in general was used as a teaching learning material. And finally the perceived nutritional content of meals provided and the time such meals were served as described by participants.

Teacher involvement in the school feeding program as described by participants can be described simply as "assistance on call". Most participants indicated that the head teacher has always been the contact person through which grievances regarding the school feeding program were channeled. Besides, the school had a food management committee which had oversight responsibility of how meals were provided and what went into it. On the question of linkage between meals and instruction, it was instructive to note that almost all participants were unaware of such a policy. For example, in response to the question; "do *you make any connection between meals served and what you teach your class?*" The response by Educator #5 was; "no I don't make any connection". Again when asked if she was aware that connections must be established between school feeding and instruction, the response was in the negative. This is how the educator put it; "no, you just made me aware" (Educator #5).

Some educators however described connections between school feeding and teaching within the context of reinforcement. For example, an Educator #6 response to a question on connection was; "yes, I do. I tell them if they are unable to finish early they would not go for their meals and you will see them doing their work in hurry in order to finish early and go for their meals". Educator #2 put it this way; "yes, sometimes I do. When I give them work and they feel lazy in doing, I will tell them if they do not do it they will not be allowed to eat their meals, and this usually inspires them to do their work such that they can go for their meals". Asides the above These notwithstanding, responses by some educators reflected some levels of connections between class lessons and school feeding even though others saw such an approach to be tenable only at the higher primary level. For example, Educator #4 response to a question on this subject was; "when lessons are taught we take them through food related topics like what someone is expected to do when hungry and also where to go for meals". On the same question, Educator #1 opined;" that will be in class 6 but not at this level. In class 6 children can be taught the nutritional content of the food they eat and how to stay healthy but not this level. I think they are too young for such an exercise".

Still on question two, even though most participants saw meals served as inadequate they still described it as supplement to hunger. Indeed, there was agreement by all the participants that most children did not eat before coming to school. Though participants could not attest to the nutritional content of meals served because they were not previewed to what goes into meals as indicated by them, they did attest to their effect on the growth of children because according to them, most children were from poor homes where food was a scarce product. For instance, Educator #7 on whether the school feeding program should be abolished was this: "The program should continue but they should improve on the quality and quantity of the food prepared. The quality is somehow better but the quantity is not encouraging at all".

Times for serving meals as revealed in the focus group discussion was supposed to be after first break but that according to participants had not been consistent. For example, according to some educators, since meals were transported from outside the premises of the schools there were usually issues with transportation and this served as source of distraction in teaching. The situation was described by Educator #8 as; "the food does not come on time and when you are teaching and the matron arrives with the food you will have to stop teaching for the children to go out for their food. The problem is more serious when on a particular day the food does not come at all, the children lose concentration and teaching becomes a problem. Put differently, Educator #2 indicated that; "I think it would be better for us if the program is sustained because sometimes children put all their hopes on the meals and when it so happens that the matron does not show up with food, it makes their days very bad".

Finally, regarding the impact of the Ghana school feeding program on effective instruction, responses generally centred on the program being a lifeline to children's school attendance and concentration. The findings reflected educators view of children not concentrating and being efficient in class work when hungry because as most participants put it; the program serves as the source of meals for most children. For example, when asked if the program should be abolished? Educator #8 retorted by saying:

No and no again; it must be continued. Some years back we realized that some children were taken to certain areas to help their parents work and support their families. But today because of the school feeding program most parents bring their children to school as early as KG because they do not have to worry about their food. I think the government that brought about this program did very well and God gave it a good vision...... Children come to school and are prepared to stay in class because they know they will get food to eat.

Indeed, all 8 participants in their responses stressed the role of school feeding in keeping children in school and called for its continuous implementation.

# 5. Conclusion and Recommendations

Studies on school feeding, and teaching and learning have mostly centred on the former being an incentive for school enrolment and attendance, and again its effect on learners' performances in class. In Ghana, due to the socio-economic position of the nation vis-à-vis the cost implications of school feeding, most studies have centred on addressing challenges confronting the program and most especially its effect on efficient school management to the neglect of other objectives of the program such as source of instruction. This study as indicated, capitalized on the limited studies in the area of school feeding – instructional relationship by looking at how this connection was fused at some early childhood centres in the Winneba municipality of Ghana.

The findings of the study can be grouped under three thematic areas. First, the Ghana school feeding program is viewed as a government program aimed at encouraging children to enroll and stay in schools, and also to augment their nutritional deficiencies that is as a result of poverty. Secondly, there is clear evidence of naivety on the part of early childhood educators about the Ghana Education Policy on school feeding being an instrument of instruction. It is clear by this study that there is a misunderstanding of how this connection should be established by early childhood educators. Clearly, there has not been enough orientation on the part of educators regarding their place and role in the use of school feeding for effective educational practices. These notwithstanding, and also as a third thematic area of the study, there is consensus on the part of early childhood educators within the study area that the Ghana school feeding program has had direct impact on teaching and learning especially in the areas of hunger alleviation, and learner enrolment and retention. Hence, for participants of this study, the program should not only be maintained but improved. This assertion however, it must be emphasized is that of educators and should not be stretched to represent other stakeholders such as parents and pupils.

Based on the forgoing, the study provides the following recommendations:

- First, the guiding policy of the Ghana school feeding program as stipulated by the Ghana education service must be sourced by all teachers including early childhood educators and their roles in the implementation of this policy must be well understood and effected.
- Secondly, concrete steps must be taken by the relevant agencies such as the Ghana education service or respective schools
  with early childhood centres to ensure training for teachers and early childhood educators on skills and techniques for
  efficient and effective connection between the Ghana school feeding program and lessons taught.
- Thirdly, an important program such as the Ghana school feeding program as revealed in the presentations of participants of
  this study should have a place in the early childhood educational curriculum, and in the curriculum of early childhood teacher
  training institutions. Hence, urgent steps must be taken to accommodate the program in the curricula of these educational
  setups.
- Fourthly, school meals should as much as possible be served during morning because a number of studies do attest to the benefits of meals during this period (see; McEwan, 2013)
- Last but not the least, concrete steps must be taken by beneficiary schools of the Ghana school feeding program to ensure that meals are prepared in the schools especially due to the benefits accompanying such practices.

In summary, it is refreshing to acknowledge the demonstrable commitment on the part of the government of Ghana in the realization of an efficient and effective early childhood educational program. This commitment in addition to other gestures is revealed in school feeding being made an important component of basic education of which early childhood education is part.

Of course, positive intentions represented in policy must be applauded but they turn to lose their benefits if not put in practice. This study affirms this position. That is, the Ghana school feeding program relative to the program being an avenue for instruction as stipulated in the Ghana school feeding document is not practiced. Hence, the interface that should be chucked in the direction of school feeding-teaching-learning relationship is not realized as evidenced in the findings of this study. In spite of this, it is important for these conclusions not to be extended to other institutions because of the limited scope of the sampled population. As such, it is the suggestion of this study, that future studies on this subject should endeavour to extend the scope of participants to a bigger population sample. Again, future studies should elicit the perspectives of other stakeholders such as pupils and parents in the direction of the interface between school feeding and instruction. Furthermore, future studies should look at the nutritional content of meals served as part of the Ghana school feeding program. And last but not the least, studies in the area of school feeding should address the extent to which Ghana's school feeding program affects cognitive and intellectual development of learners especially at the early childhood level.

# 6. References

- i. Abdulai, A. (2013). The question of teacher background and quality early childhood education. A look at some selected schools in the Winneba municipality of Ghana. Journal of Education and Practice, 4(9), 80-86.
- ii. Afridi, F. (2011). The impact of school meals on school participation: evidence from rural India. Journal of Development Studies, 47(11), 1636-1656.
- iii. Allen, L.H., &Gillespie, S.R. (2001). What Works? A Review of the Efficacy and Effectiveness of Nutrition Interventions. Manila: Asian Development Bank with the UN ACC Sub-Committee on Nutrition.
- iv. Anamuah-Mensah National Education Review Committee Report. (2002). Report of the President's Committee on Review of Education Reforms in Ghana. Accra: Ministry of Education.
- v. Bennet, J. (2003). Review of school feeding projects. DFID.UK.
- vi. Belot, M., and James, J. (2011). Healthy school meals and educational outcomes. Journal of Health Economics, 30(3), 489-
- vii. Buhl, A. (2012). Meeting the nutritional needs through school feeding: A snapshot of four African nations. Washington: University of Washington.
- viii. Bukari, M., & Hajara, I. P. N. (2015). The Ghana school feeding program: Factors affecting enrolment of pupils in Garu-Tempane district, Upper East Region. International Journal of Innovative Research and Development, 4(1), 298-303.

- ix. Bundy, D., Burbano, C., Grosh, M., Gelli, A., Jukes, M., & Drakes, L. (2009). Rethinking school feeding: Social Safety Nets, Child Development and the Education Sector. A World Bank and World Food Program Report. Retrieved April 25, 2016 from: https://openknowledge.worldbank.org/bitstream/handle/.../48742.pdf?...
- x. Del Rosso, J.M. (1999). School feeding program: Improving effectiveness and increasing the benefit to education. Oxford: Partnership for Child Development.
- xi. Glewwe, P. (2005). The impact of child health and nutrition on education in developing countries: Theory, econometric issues, and recent empirical evidence. Food and Nutrition Bulletin, 26(2), 131-134.
- xii. Ghana School Feeding Program. (2005). Annual Operating Plan 2006, Accra: Ghana.
- xiii. Government of Ghana (2006) Ghana School Feeding Program, Program Document 2007-2010.
- xiv. Hall, A. (2001). Micronutrient supplement for children after deworming. THE LANCET Infectious Diseases, 7(4), 297-302.
- xv. Jomaa, L.H., McDonnell, E., and Probart, C. (2011). School feeding programs on developing countries: Impacts on children's health and educational outcomes. Nutrition Reviews, 69(2), 83-98.
- xvi. Khatete, I.W., Pendo, S., &Oyabi, J.M. (2013). School feeding program and pupils' participation in primary schools in Kenya. Journal of Emerging Trends in Educational Research and Policy Studies, 4(6), 895-900.
- xvii. McEwan, P.J. (2013). The impact of Chile's school feeding program on education outcomes.
- xviii. Economics of Education Review. Vol.32. 122-139.
- xix. Manu, J., & Atta, P.G. (2015). Global school feeding program: A retrospective review. International Journal of Innovative Research and Development, 4(8), 402-409.
- xx. Martorell, R., Melgar, P., Maluccio, J.A., Stein, A.D., Rivera, J.A. (2010). The Nutrition Intervention Improved Adult Human Capital and Economic Productivity. Journal of Nutrition, 140 (2), 411-414.
- xxi. Mohammed, A., &Sakara, F. (2014). Assessing Ghana school feeding program on the enrolment of beneficiary schools in the Tamale metropolitan assembly of northern Ghana. International Journal of Economics, Commerce and Management. Vol.2 (10).
- xxii. Oduro-Ofori, E., & Adwoa-Yeboah, G. (2014). The contribution of the Ghana school feeding program to basic school participation. A study of selected schools in Kwaebiriem district of Ghana. Developing country studies, 4 (19), 40-50.
- xxiii. Powell, C.A., Walker, S.P., Chang, S.M., & Grantham-McGregor, S.M. (1998). Nutrition and education: A randomized trial of the effects of breakfast in rural primary school children. American Journal of Clinical Nutrition. Vol. 68 (4).
- xxiv. The Constitution of the Republic of Ghana (1992). Ministry of Justice. Ghana. Accra:
- xxv. Assembly Press of Ghana Publishing Company Limited.
- xxvi. Tomlinson, M. (2007). School feeding in east and southern Africa: Improving food sovereignty or photo opportunity? Equinet Discussion Paper Number 46. March, 2007. Retrieved on, April 25, 2016 from: www.equinetafrica.org/sites/default/files/.../DIS46nutTOMLINSON.pdf
- xxvii. Uduku, O. (2011). School building design for feeding programs and community outreach: Insights from Ghana and South Africa. International Journal of Education Development, 31 (1), 59-66.
- xxviii. UN Millennium Project (2005) Halving Hunger: It can be done, Taskforce on Hunger http://www.unmillenniumproject.org/reports/tf\_hunger.htm
- xxix. UNESCO International Bureau of Education. (2006). Country profile prepared for the Education for All Global Monitoring Report 2007. Strong Foundations: Early Childhood Care and Education. Geneva (Switzerland).
- xxx. Winicki, J., and Jemison, K. (2008). Food Insecurity and Hunger in the Kindergarten Classroom: Its Effect on Learning and Growth. Contemporary Economic Policy, 21, (2), 145-157.
- xxxi. World Bank. (1985). Education for Development: An analysis of investment choices". World Food Program Report (2004). Fight Hunger Worldwide: Ghana
- xxxii. World Food Program Report (2007) Home-Grown School Feeding- field case study: Ghana.
- xxxiii. Worobey, J and Worobey, H.S. (1999). The impact of a two -year school breakfast program for preschool-aged children on their nutrient intake and pre-academic performance. Child Study Journal, 29 (2), 113-131.