

**EFFECT SCHOOL FEEDING PROGRAMME ON
LEARNERS' ACADEMIC PERFORMANCE. A CASE OF
GSRWAKIRARI AND GSKAYEYO IN KIVURUGA SECTOR OF
DISTRICT GAKENKE, RWANDA (2015-2019)**

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ISSN 2277-7733

Volume 10 Issue 4,

March 2022

Abstract

This study entitled "Effect of school feeding program on learners' academic performance in nine years basic of education in Rwanda. Case of G/S Kageyo and GSRwakirari. 2014/2019. The study had the following objective. They are namely: to determine the effect of school gardens and staff training to the learners' academic performance in Gakenke District. It had also the following hypotheses as they follow, there no significant effect between school gardens and staff training to the learners' academic performance in Gakenke District. Researcher used descriptive research design while interpreting and analyzing the data. The study used 675 as study population and sample of 251 participants. Data was collected using structured questionnaire with 5-point Likert scales. Quantitative data was analyzed using frequencies, percentages, standard deviation, means and regression analysis. Study revealed that there is significance relationship between schools feeding program on learners' academic performance in Rwandan nine years basic of education. Multiple regression analysis concluded that school feeding affect learners academic performance. The study recommended government the following: Government has to mobilize more stakeholders or non-government organization to orient their funds in the implementation of school feeding program.

Keywords: *school feeding, alleviating short term hunger, school gardens and nine years basic of education.*

Education is the most important tools that can lead the world to development, it is also the main key that can take millions of people who live in poverty out of suffering. Means that when a country wants to develop herself economically, politically and socially, has firstly to put more effort in quality of education which is acquired by its citizens within the country. Education is one of factors that can rise intellectual, social, and economic and culture aspects of any given country (Burtch, 2006).

School feeding programme is an international programme that was started in the developed and less developed countries to overcome the problem of poverty and increase the number of learners who enroll the schools, both were targeting the increase of learners' academic performance. School feeding programme in some countries is grouped into different categories but the most well-known are two categories: taken meals at school and supplying food to the families. Families are given food because their children have attended the school, means that the families that have not sent the children at school do not get this opportunity (Oyefade, 2014).

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School feeding came as solution of routine problems that was hindering the development of the quality education because in some countries some children could spend the night without dinner even when they come to school they do not take lunch so this mostly like to affect their cognitive aspects that resulted from malnutrition (Arsenault et al, 2009). Because of poverty in the families learners used to miss the class. Let us take an example of some impacts of poverty on school enrollment like school dropout, absenteeism, dodging, poor academic performance and early pregnancy. Since the time school feeding started being implemented, the world started experiencing high level of school enrollment and big number of the students return to schools while others were motivated to come to school for studying (Ahmed, 2004). Means that some of the countries failed to implement this programme hundred per cent. Even if country can put more effort, there are also some schools which fail to put it into practice. Yunusa, Gumel, Adegbusi&Adegbusi, (2012) indicated that learners who are involved in school feeding program increase their academic performance because they regularly come to school and then they even learn effectively. Because they always have full diet which come like answer to the problems of stunting, and malnutrition.

Many countries of Africa are strengthening school feeding program because according to Jomaa, McDonnell and Probart, (2011) indicated that school feeding program is one the instruments that help in students retention through program dropout was reduced, number of learners enrollment and absenteeism was also managed but the countries that went slowly faced high level of dropout, absenteeism together with poor quality of education. This is the reason why if those countries do not do any change their education should remain is shambles. In 2016 in the meeting, head of state and government announced that 1st March is a day of school feeding programme. Thereafter head of state and government said that giving meals at school will help in increasing numbers of learners at school and reduce short term hunger in community and learners' academic performance will be increased through this programme.

Government of Rwanda is putting more effort to implement this policy because is among the most important way that can bring back many children who dropout the school, and also will reduce the number of million children who are stunted. School absenteeism will be reduced as the results of this programme. Always government is making mass mobilization to put more effort in school feeding because this programme has also part that parents has to pay to supplement the share of government. According Tette and Enos (2020). On 15th March, 20219 Rwanda celebrate 4th edition of African day of school feeding as the methods that was used to reduce social vulnerability, increase learners academic attendance and solve the impact of hunger on learning and academic improvement (The 4th edition of African Day of School Feeding celebrated countrywide, 2019). After analyzing the literature about the problems of school feeding the researcher decided to make an investigation on the effect of school feeding program on learners' academic performance in Rwanda (Mukanyirigira, 2010).

Research hypothesis

There no effect of school gardens and staff training on the learners' academic performance in District Gakenke and There is no effect of Food security and nutrition policy to the learners' academic performance in District Gakenke.

Theory of human needs (Maslow's pyramid of needs)

This theorist played an important role in the arena in human motivation, a theorist discussed about human needs and he come up with five level in human needs development. Once one level is satisfied the next one takes place (Jerome, 2013). The first level is physiological needs, this is biological needs that can enable human existence like Air, food, water and clothes. Further Abraham indicated that this needs if it doesn't work human development is not possible. Means in education perspectives. Students' needs should be at the first place of all the things because it is not possible to teach a child who is stunted, undernourished or who doesn't have where to live and other basic needs. If learners is cognitively underdeveloped he/she cannot study because the intellectual quotient cannot support teaching and learning activity well (Chapman, 2001).

Second level of Abraham developed another level that should be the next after the first one is satisfied which called safety needs. This one is related to the security and safety, and it goes hands in hands with family and society, for this reason human being needs medical care, security, order, school and business. Human being needs financials means security, social stability, health care. Third level is of Abraham is love and belongingness, after that first and next level is satisfied third one also arise person needs interpersonal collaboration and this relationship can motivates behavior. In this level human being is happy and motivated when is belonged and become a part of a group at work, family, society. In education through school feeding programme learner can develop through sharing meals and sport with his/her classmates and schoolmates. When this is satisfied can contribute to the increase of learners' academic performance (Einstein, Addams & Roosevelt,2016).

According to Huit, (2007) indicated that fourth level is esteem needs, where a human being can have prestige, independence, achievement and also status, prestige can enhance leaners performance. Lastly, Maslow described that the need for or reputation or respect is the key of everything for children, and develop learners real self-esteem or dignity. Self-actualization needs at this level a human being needs peak of growth and experience. You can see this when one is economically, academically strong (Rouse, 2004).

Means that school feeding programme is among the most important things that rise learners' academic performance. Because physiological needs fits hundred percent in school feeding programme as the only one thing that can solve the problem of food and drinks and others things. This level is very important because it motivates all the remaining levels.

School gardens and staff training

Many countries are advising the schools to start school gardens that will enable schools to have many food supply that will develop school feeding programme.

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In US there is greening schoolyards so that they can develop good health of the students. Through school garden, learners will get a places for relaxing and enjoying during break time because that places it is better in creating conducive environment. Many schools in USA have created many school gardens that are used academically like in nutrition, mathematics, environmental studies and health (Graham, 2002). Many organization had put more effort in strengthening sustainable agriculture and food schemes, this is made as teaching children food consumption and preservation of the environment. School garden is among the most topic that should be included in curricular activities so that every category will have notion to a school garden (Azuma, Horan & Gottlieb, R. (2001). Other side many schools in Rwanda and other developing are located in steep slopes areas so that putting there a garden is not easy. In addition to that even the space for a school is not sufficient. But school garden can contribute to the learners' academic performance not only for food supply only but also for teaching and learning process because it can be used in improvisation. It is commonly known that teachers can use school gardens in teaching and learning like biology, chemistry, agriculture, environmental studies such as geography. In recent years school start a programme of teaching learners about healthy diet routine, in addition to school meals that they take which can be an example for what they have learned. Healthy education nowadays become part of curriculum. Even if ministry of education is there (Centers for Disease Control and Prevention, 2013). It is very justifiable that academic performance can be maintained together with high learners academic performance when health related programme become our routine in education perspective. School garden contribute in education and in learners academic performance in different ways. For example it can be a source of food security that was serious problem in developing countries. When there is food security academic enrollment increases, absenteeism reduced, dropout reduced, later coming at school reduced too. Even administrative, teaching staff can be motivated as long as they can take meals at school too instead of going to home at midday and return at school. This seems to time consuming and wasting time academically. School have also to include teachers in that policy of school feeding programme. School garden can also increase academic performance by using that green schoolyards in delivering the contents in some subjects, teachers need teaching aid that can supplement other provided instructional materials provided by government, schools and parents. Through improvisation process teacher can use available materials find in ecological system. But as difference some researchers indicated that school gardens can be among the factors that can rise learners academic performance but this some researchers oppose it because they might be other factors that enhance learners academic performance like teachers experience, teachers qualification, school environment, continuous professional development given to the teachers, timetable, leadership style and learners motivation like inner and external motivation.

Methodology

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Sample size is specific number that was taken from target population to represent others. And the information found from them was applied for all the population. In this research, the researcher used probability and non-probability sampling. Probability sampling refers to the methods where all the items have an equal chance to be selected, means that each person have the opportunity to put in the study while non-probability sampling is where all the items in study have no equal chance to be selected. Purposive sampling was used to select headteachers, bursars director in charge of studies and for teachers and parents, a researcher was used random sampling method. Because studying all the sectors is not possible depending to the size, money and time. The researcher decided to use schools that are located in Kivuruga sector. Rao soft calculator was used to calculate sample size from the target population.

Findings

Descriptive Statistics School garden and trained staff and learners' academic performance.

| Statements | N | Min | Max | Mean | Std. |
|---|-----|------|------|--------|---------|
| School garden contribute in academic performance | 251 | 1.00 | 5.00 | 3.9004 | 1.07798 |
| This school cultivates vegetable to supplement school feeding | 251 | 1.00 | 5.00 | 4.0279 | 1.03306 |
| Product from school garden help in production full diet | 251 | 1.00 | 5.00 | 4.0956 | 1.07649 |
| This school provide training to staff about full diet | 251 | 1.00 | 5.00 | 4.0398 | 1.06132 |
| Trained staff contribute in preparation of full diet and developing of school feeding | 251 | 1.00 | 5.00 | 4.0837 | 1.02224 |
| School garden contribute in lesson improvisation | 251 | 1.00 | 5.00 | 4.0956 | 1.05015 |
| School which does not have garden manifest poor academic performance | 251 | 1.00 | 5.00 | 3.8884 | 1.16426 |
| School garden contribute in creating in conducive environment | 251 | 1.00 | 5.00 | 4.0000 | 1.09545 |
| Having employees who is in charge of school garden contribute in school feeding | 251 | 1.00 | 5.00 | 3.8406 | 1.15521 |
| Unhealthy diet hinder learners academic performance | 251 | 1.00 | 5.00 | 4.0040 | 1.12605 |
| Valid N (listwise) | 251 | | | 4.07 | 1.08 |

Note: Strongly Disagree = [1]= Very Low mean; Disagree= [1-2]=Low mean; Neutral= [2-3]=moderated mean; Agree= [3-4]=High mean; Strongly Agree= [4-5]= Very High mean

The results from table 8 showed that respondents strongly agreed that the following variables influence learners' academic performance. These are namely: Unhealthy diet hinder learners academic performance($\mu=4.0040$ and $STD=1.12605$, School garden contribute in creating in conducive environment($\mu=4.0000$ and $STD=1.09545$), School garden contribute in lesson improvisation($\mu=4.0956$ and $STD=1.05015$), Trained staff contribute in preparation of full diet and developing of school feeding($\mu=4.0837$ and $STD=1.02224$), This school provide training to staff about full diet($\mu=4.0398$ and $STD=1.06132$), this school cultivates vegetable to supplement school feeding($\mu=4.0279$ and $STD=1.03306$), The results in table 8 also showed that majority of respondents agreed the following variables influence learners' academic performance. These are the following: School garden contribute in academic performance ($\mu=3.9004$ and $STD=1.07798$, School which does not have garden manifest poor academic performance ($\mu=3.8884$ and $STD=1.16426$), having employees who is in charge of school garden contribute in

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school feeding ($\mu=3.8406$ and $STD= 1.15521$). Overall, decision is that majority of respondents strongly agreed that that school garden and trained staff impact learners' academic performance as they have provided proof at very high mean ($\mu=4.07$ and $STD=1.08$).

Regression analysis on School garden and trained staff and learners' academic performance.

| Model Summary | | | | |
|---------------|-------------------|----------|-------------------|----------------------------|
| Model | R | R Square | Adjusted R Square | Std. Error of the Estimate |
| 1 | .931 ^a | .867 | .850 | .03009 |

a. Predictors: (Constant), School garden and staff training

The results indicated that 86, 7% of variation in the dependent variable (learners academic performance) can be explained by School garden and trained staff and the remaining percentages can be clarified by other variables which are not examined in this model. Analysis of variance of School garden and trained staff and learners' academic performance.

Analysis of variance of School garden and trained staff and learners' academic performance

| ANOVA ^a | | | | | | |
|--------------------|------------|----------------|----|-------------|--------|-------------------|
| Model | | Sum of Squares | Df | Mean Square | F | Sig. |
| 1 | Regression | .047 | 1 | .047 | 52.064 | .000 ^b |
| | Residual | .007 | 8 | .001 | | |
| | Total | .054 | 9 | | | |

a. Dependent Variable: Academic performance

b. Predictors: (Constant), School garden and staff training

The analysis of variance showed that School garden and trained staff has positive and significant effect of on learners academic performance in nine years basic of education in Rwanda ($F= 52.064$ P value >0.05). This indicated that null hypotheses is rejected and alternative is accepted.

Regression Coefficients on School garden and trained staff and learners' academic performance.

| Coefficients ^a | | | | | | |
|---------------------------|----------------------------------|-----------------------------|------------|---------------------------|-------|------|
| Model | | Unstandardized Coefficients | | Standardized Coefficients | | Sig. |
| | | B | Std. Error | Beta | t | |
| 1 | (Constant) | 1.001 | .438 | | 2.284 | .052 |
| | School garden and staff training | .791 | .110 | .931 | 7.216 | .000 |

a. Dependent Variable: Academic performance

Regression analysis showed that significance influence of School garden and trained staff and learners academic performance in nine years basic of education in Rwanda ($B= 0.791$ p value <0.05).

Discussion

Regarding to the research objective number three which is School garden and trained staff and learners' academic performance, study revealed that there positive and significant effect of school gardens on trained staff has on learners academic performance and the study indicated that null hypotheses is rejected and alternative is accepted ($F= 52.064$ P value >0.05). This manifested that training staff on how to make a complete diet enhance the school to prepare equilibrate food which can help students to grow up and become healthy.

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School can be used in different ways such in lesson improvisation and using it in discovering teaching aids that can contribute in creating teaching and learning as conducive environment as learners have an access to concrete lesson. According to Ozer, (2007) indicated that there are evidence that school gardens has significant impact on learners academic performance not only in achievement but also in health development. Indicated that school garden is being developed in different place of the world as they have discovered that this program can enhance school to be among the most performing institution. Another one is Childs, (2011) who indicated that school garden has positive impact on changing students' attitudes towards environmental utilization and how it can help them to make effective learning.

Conclusion

Finally, education can be successful when all the partners work together to achieve students' performance. This means that government, non-governmental organization and parents have to work together in creating conducive environment that can let students feel motivated. School feeding is among the factors that helped government of Rwanda to increase students' performance and also increase of enrolment numbers. School feeding is not one thing that people can think and invest money in this policy only. Because they might be other variables that people must strength to make this program successful they are namely: having trained staff, well prepared school garden, giving students full diet and so on. School feeding have changed education system of many countries around the world but its implementation should be strictly monitored and controlled.

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