

Research Application Summary

**Potential of school gardening as a laboratory for developing life skills in agriculture: The case of Universal Primary Education Schools in Kamuli and Soroti districts, Uganda**

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**Abstract**

School curricula in Africa emphasise competitive academic subjects and prioritize terminal examinations over practical skills. Although it has been argued that schools can serve as platforms for reaching rural communities with farming innovations through pupils, school gardening is often viewed as a labor-based activity that offers pupils few learning opportunities. Majority of these leave school without employability skills. This study was conducted in two primary (elementary) schools under the Universal Primary Education (UPE) programme in Uganda to determine the potential of school gardening in providing life skills in agriculture but also to mitigate short-term hunger in UPE schools. Data were collected for two cropping seasons (4 school terms) using qualitative methods of focus group discussions (FGDs), interviews, and observation. Findings showed that there was strong interest by pupils to participate in school gardening activities and enhanced learning transfer of skills from the school garden to home gardens. The agricultural clubs offered the social energy that formed the foundation for learning technical aspects of agriculture in a more supportive environment of work and fun. Benefits of participating in school gardening included acquisition of knowledge and practical skills on crop production skills by pupils, food eaten by pupils and teachers acquisition of people oriented skills such as leadership, teamwork among others. It is recommended that school gardening activities be extended to the various education stakeholders and the communities. Furthermore, the primary school agriculture curriculum in Uganda necessitates review to include the practical component.

Key words: Life skills, primary schools, school gardening

**Résumé**

Les programmes scolaires en Afrique mettent l'accent sur la concurrence des sujets académiques et mettent la priorité sur les examens finaux au-delà des compétences pratiques. Même si on a fait valoir que les écoles peuvent servir de plates-formes

pour atteindre les communautés rurales qui font les innovations agricoles à travers les élèves, le jardin de l'école est souvent considéré comme une activité de main-d'œuvre qui offre quelques élèves des occasions d'apprentissage. La majorité de ces élèves quitte l'école sans les compétences pouvant les permettre à obtenir un emploi. Cette étude a été menée dans deux écoles primaires (élémentaires) qui pratiquent le programme de l'éducation primaire universelle (UPE) en Ouganda pour déterminer le potentiel de jardinage à l'école dans l'enseignement de compétences agricole pour la vie dans, mais aussi pour atténuer la faim à court terme dans les écoles UPE. Les données ont été recueillies pour deux saisons de culture (4 trimestres scolaires) en utilisant des méthodes qualitatives de groupes de discussion (FDG), des entretiens et des observations. Les résultats ont montré qu'il y avait un vif intérêt par les élèves de participer à des activités de jardinage scolaire et le transfert d'apprentissage amélioré des compétences du jardin de l'école aux jardins familiaux. Les associations agricoles de l'école ont offert l'énergie sociale qui a constitué la base de l'apprentissage des aspects techniques de l'agriculture dans un environnement plus favorable de travail et d'amusement. Les avantages à participer au jardinage à l'école comprenait l'acquisition de connaissances et de compétences pratiques sur les techniques de production des cultures par les élèves, les aliments consommés par les élèves et les acquisitions d'enseignants orientées vers les compétences des personnes, telles que le leadership, le travail d'équipe entre autres. Il est recommandé que les activités de jardinage à l'école soient étendues aux différents acteurs de l'éducation et aux communautés. En plus, le programme d'agriculture de l'école primaire en Ouganda exige une révision afin d'inclure d'inclure la composante pratique.

Mots clés: compétences pour la vie, écoles primaires, les jardinages d'école

## **Background**

School gardening is an instructional strategy that utilizes a garden to let educators incorporate and sustain hands-on learning in a diversity of interdisciplinary standards. The garden engages pupils to observe, discover, experiment, nurture and learn from real-life experiences. These experiences can be turned into production and last a lifetime. School gardens existed in the 1950s through 1980s for purposes of supplying food (midday meals) for pupils and teachers at school and complementing science lessons through experimental learning. They were then

ignored for reasons that ranged from negative attitude of pupils, teachers and parents as well as changing government policies. This study mainly set out to test the potential of school gardening in developing life skills and attitude change towards agriculture among pupils and for primary schools to serve as centers for agricultural knowledge in communities in Kamuli and Soroti districts. Specifically, this study was intended to (1) establish the benefits of school gardening as a learning laboratory to enhance knowledge and skills in agriculture in primary schools (2) assess whether agricultural clubs can motivate and inspire pupils to learn and practice agriculture (3) assess the transfer of knowledge and skills acquired from school gardening activities to the pupils' homes (4) establish the attitudes of the pupils, teachers, parents and the local community towards school gardening.

### Literature Summary

School curricula in Africa are dominated by competitive academic subjects and prioritize terminal examinations over practical skills and contextualized learning. Consequently, education systems in Africa are rated as short of life skills that link well with the needs of communities (Vandenbosch, *et al.*, 2002). Whereas agriculture is the most important source of livelihood in the rural communities, its requisite knowledge and skills are largely acquired through experience and not so much through the education system. This phenomenon creates disconnect challenges to the relevance of education in preparing the young people for better livelihood.

The Uganda government White Paper on Education for national integration and development recommended Universal Primary Education (UPE) programme and vocationalization of education through teaching of agriculture and other practical subjects (Government of Uganda, 1992). The UPE programme that was then introduced in 1997 faces a number of challenges including high dropout rate which Murphy (2003) estimated at about 80%. Besides, less than 30% of the children who enroll in primary one complete primary seven yet most of these turn to farming as a source of livelihood (Kibwika *et al.*, 2010). The new Primary School Agriculture (PSA) curriculum seeks to vocationalise the education system at primary school level as a response to the high UPE drop-out rates to enable the pupils gain some transferable life skills in agriculture. However, five years after the introduction of the agriculture curriculum, it was still uncertain whether pupils actually made significant learning achievements in the subject and applied their school knowledge

on home farms (Okiror *et al.*, 2010). The concern is whether the education at primary level prepares pupils to earn better livelihood than their parents through agriculture.

Although it has been argued that schools can serve as platforms for reaching rural communities with farming innovations through pupils (Miro and Orum, 2007), in the case of Uganda, agriculture in schools is often viewed simply as a labor-based activity that offers few learning opportunities to pupils engaged in it, a majority of whom leave school without employability skills (Kibwika and Tibeziinda, 1998). Learning agricultural production skills does not only benefit pupils after they dropout of schools, but it could also be of immediate benefit to them while in schools through school gardening. If properly applied, school gardening could enable the schools to produce food to partly cater for their school feeding programme. Lack of school feeding programme in the UPE schools has been identified as a major cause for school dropout.

## **Study Description**

The study was conducted in two consecutive cropping seasons in 2010/2011. Purposive selection was employed to select a sample of 200 pupils (100 per school) in the two primary schools of Nalango and Tubur primary in Kamuli and Soroti districts, respectively. The two districts were purposively selected based on their relatively higher vulnerability to hunger, poverty incidences (Uganda Poverty Status Report, 2005) and being in two different cultural settings. Soroti district experienced floods in 2007/2008 also posing another dimension of food shortage vulnerability. The study employed a case study methodology applied in action research framework to engage with pupils organized in agricultural clubs and teachers in the two schools. Qualitative case study design was suitable for understanding relationships between the context, mechanism and outcome of an intervention like school gardening. The action research framework allows mutual learning through practice while posing critical and reflective questions on the action. Data were collected using in-depth interviews with respondents, informed interviews with key stakeholders, theoretical tests administration, focus group discussions and participant observation. Thematic analysis of data was applied to the qualitative data which was clustered in respective themes based on content. The processes of interviews from various pupils produced five major and recurring themes: enjoyment from participating in the garden, previous gardening experience, parental influence on school gardening

experience, school influence on knowledge application, and classroom reinforcement for gardening and knowledge retention.

### **Research Application**

Findings showed that there was strong interest by pupils to willingly participate in school gardening activities and enhanced learning transfer of skills from the school garden to pupils' home gardens. The agricultural clubs offered the social energy that formed the foundation for learning technical aspects of agriculture in a more supportive environment of work and fun. School gardening had a number of benefits to pupils such as acquisition of knowledge and practical skills on crop production (life skills), food eaten by pupils and teachers and people oriented skills such as leadership, teamwork among others. Results also showed immense potential of using schools as social change centers for communities as they connect parents back to school. It is thus recommended that various education stakeholders and the communities be exposed and engaged to appreciate the processes and outcomes of school gardening. The primary school agriculture curriculum in Uganda necessitates review to include the practical component in the school timetables. Funding support should be incorporated into school budgets to ensure continued implementation of school gardening activities by school administrators as well as their supervision by district education inspectors. The implementation of school gardening should ensure ownership of benefits by pupils for their motivation. Publicity challenge could be offset by engaging a wide range of stakeholders including the media to create awareness, advocate for and popularize the best practices of school gardening.

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