

Factors Affecting the Teaching and Learning of Agriculture in Secondary Schools in Bushenyi District Bitooma Sub-County

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ABSTRACT

The teaching and learning of agriculture in secondary schools have faced challenges over the years, leading to a decline in student interest and performance. Despite its relevance in everyday life, the subject struggles to captivate students and has witnessed diminishing participation in national examinations. This study delves into the factors affecting the teaching and learning of agriculture in Bitooma-Kyamuhunga Sub-County, Bushenyi District, focusing on the period from 2007 to 2010. Previous research highlights various challenges, including teacher qualifications, instructional materials, traditional biases, and government support. Teachers' interaction with students, availability of textbooks, and societal perceptions significantly impact the effectiveness of agriculture education. A cross-sectional survey combining qualitative and quantitative methods was conducted in five secondary schools. Data was collected from head teachers, agriculture teachers, and students from different classes through questionnaires, interviews, and observations. Findings revealed a lack of instructional materials, with only a fraction of students having access to essential resources like textbooks. Additionally, teacher qualifications varied, with only half possessing formal qualifications in agriculture. Traditional biases and parental attitudes further deterred student interest, contributing to the subject's poor performance. The study underscores the need for more qualified agriculture teachers, adequate instructional materials, and government support to improve the teaching and learning of agriculture. Recommendations include enhanced teacher training, provision of resources, and efforts to change societal perceptions towards agriculture. Addressing the identified challenges can revitalize agriculture education, fostering student interest and improving academic performance. Collaboration between stakeholders, including educators, policymakers, and communities, is crucial in overcoming these obstacles and promoting agricultural literacy among students.

Keywords: Learning, Agriculture, Secondary Schools, Students

INTRODUCTION

Agriculture has been in existence as designed in the NCDC curriculum for secondary schools to be taught in o'level for some good years. It has been discovered that students who offer it, beginning at senior three, started when the number was high but kept on reducing up-to-date when many have run out of the subject. It is observed that UCE examiners have been reduced year after year due to the reduced number of students taking the Agriculture UCE exams. Agriculture worldwide is expected to be learned easily from the everyday environment with the help of intelligently trained personnel [1,2]. At its best, this makes one largely dependent on teachers, including all those who wrote books on agriculture [3,4]. He also argues that teachers must command respect before the learners by having subject matter and being able to capture students' attention. Teachers' attitudes towards agriculture are also believed worldwide to influence the behaviour and ability of their learners. This prompts us to be aware that problems encountered in teaching agriculture may result from the type and character of the teacher [5,6]. With the availability of some agriculture teachers in the country schools, agriculture books, and other learning materials provided by the ministry and privately by schools in reference to Horizons in teacher education, according to Karoro [7], even students still believe that the subject is hard due to the negative perception developed from the results of the previous years (2007–2010). However, even for those who offer the subject, it has been identified that since 2007 to 2010, the UCE results nationally are quite poor compared to other optional subjects that are familiar to students' learning environments, like agriculture, as quoted in Skemp R. (1986)[1] in his book of psychology. Similarly, it was found out that schools in Bushenyi District, specifically the secondary schools in Bitooma-Kyamuhunga Sub-Country, have since 2007–2010 not performed well in the subject, which has created challenges in the teaching and learning of it. This follows the investigations made in the departments of agriculture of schools like St. Francis vocational secondary school, St. Mary's vocational secondary

school, Comboni secondary school, Kyamuhunga secondary school, and Katunga vocational secondary school since 2007 to 2010 following their Agriculture UCE results. The poor performance in agriculture discovered in this study forced the researcher to investigate and find out the problems associated with the teaching and learning of the subject in Bushenyi District, Bitooma, Kyamuhunga Sub-County, from 2007 to 2010. This enabled the researcher to come to a conclusion with her findings and the possible solutions to the problem.

Agriculture as a subject is considered an important subject in secondary schools in Bitooma-Kyamuhunga Sub-County and is possible since the learner needs to learn within the environment in which he or she lives. It has been identified that in Bitooma-Kyamuhunga Sub-County, agriculture is mostly practiced, whereby farming is done. Crops are grown, animals are reared, and there are even factories that process products like coffee and tea. Such an environment therefore should make the learners like and pass the subject but have continued performing poorly. This was noticed by the researcher and the headteachers of the five visited schools. The researcher therefore found it necessary to investigate the cause of its poor performance at O'level. (As shown by UCE results from 2007 to 2010 for the visited schools.) It is a question to ask why teachers find it hard to teach agriculture and quite impossible for the learners to easily perceive it positively. The researcher was therefore forced to find out the factors that affect both the teaching and learning of agriculture in secondary schools in Bushenyi-District-Bitooma Sub-County.

LITERATURE REVIEW

Studies were done about the problems encountered in the teaching and learning of agriculture in secondary schools in Bitooma sub-county in Bushenyi District. In doing so, the researcher identified some of the related literature done by some other researchers, analysed it, and correlated it with her findings. This assisted the researcher in establishing the true findings that may improve the teaching and learning of agriculture in secondary schools. In general, problems encountered in teaching and learning agriculture rotated include the teacher himself, the learner, traditional beliefs and religious differences, instructional materials, the nature and value of the subject, and government, especially the Ministry of Education. According to Paul Croll et al. [8], "the extent to which teachers concentrate their time on interaction with individuals compared with groups and the class as a whole has been shown to relate to classroom behaviour and several other educational outcomes" There is therefore a need for teachers to handle students individually to achieve effective teaching and learning, and at the same time, this would limit the problems that are likely to be encountered while teaching and learning. The scarcity of teachers in agriculture is a problem encountered because teachers do not have enough time to interact with their students so that the learners can develop an interest in the subject [9,10] Poor discipline among students affects effective teaching and learning of any subject, such as agriculture." Due to indiscipline, students do not do their homework, come to school late, and are absent themselves, thus missing some steps that are necessary for the subject. It may therefore be true to say that poor discipline among students is part of the problems encountered in the teaching and learning of agriculture in secondary schools. Karoro [7] asserts that: "Teachers of agriculture still face an uphill task about textbooks. It is a good omen as local materials are used, but producing books is a little bit expensive."If the ministry could facilitate agriculture teaching as it does agriculture, agriculture would spread rapidly in the country and get a more significant place in the education system. The government is therefore to blame for not being committed to improving the performance of agriculture in schools. Even though the Ministry of Education has designed the syllabus for agriculture in secondary school, there is no follow-up, and no practical work on the ground is taking place. The government, therefore, especially the Ministry of Education, contributes to the prevailing problems encountered in teaching and learning agriculture in secondary schools. Skemp [1], in his book on the psychology of learning, says that: "It could be learned easily in an everyday environment with the help of intelligently trained personnel." At its best, this makes one largely dependent on teachers, including all those who wrote books on agriculture. According to Skemp [1], teachers must also command respect from the learners. They must have subject matter and be able to capture students' attention [9]. "The teacher's attitudes influence the behaviour and ability of his learners." This prompts us to be aware that problems encountered in teaching agriculture may result from the type and character of the teacher." Parel (1968), in his research, revealed that when teachers motivate their learners, the latter will come to like the subject and will score higher [11]. Brown [12] argue that a teacher who wants to teach well must make use of various instructional materials. Without them, the teacher will fail to present the subject matter effectively to students. Most of the schools in Uganda were owned by Christian missionaries [13,14]. To them, teaching agriculture in their schools was like promoting Mohammedism, which was a rival religion. This fact led to the blocking of agriculture teaching in Ugandan schools. This colonial mentality is encountered in the teaching and learning of agriculture in secondary schools. Most schools have a bias towards agriculture and associate it with the Islamic religion. Some people in Uganda do not respect agriculture because it is misused by the wrong characters such as soldiers, thieves, and the "Bayaye" (Urban vagabonds). It is therefore true to say that many problems encountered in the teaching and learning of agriculture originate from traditional beliefs and biases. According to [15], in the government white paper on education policy review (1992:19), agriculture is an important subject in Uganda that needs support. The

white paper further suggests that agriculture should be taught to all schoolchildren as a compulsory subject through the secondary school levels in both rural and urban areas. If this is implemented, the traditional and religious biases would cease to exist, and there would be effective teaching and learning of agriculture without encountering problems.

METHODOLOGY

Research Design

This was a cross-sectional survey that employed both qualitative and quantitative methods of data management. The researcher sampled a cross-section of respondents in a short period to obtain data about the problems encountered in teaching and learning agriculture in a selected study area. Data analysis involved both simple statistical measures of location and scientific logic.

Area of Study

The study was carried out at St. Francis Vocational Secondary School, St. Mary's Vocational Secondary School, Comboni Secondary School, Kyamuhunga Secondary School, and Katunga Vocational Secondary School all in Bushenyi District Bitooma Sub-County Western Uganda.

Population samples

The population samples were taken from five selected secondary schools in Bitooma Sub-County. These were: St. Francis Vocational Secondary School, St. Mary's Vocational Secondary School, Comboni Secondary School, Kyamuhunga Secondary School, and Katunga Vocational Secondary School. The population sample consisted of headteachers, teachers of agriculture, and students from S.1 up to S.4. This helped the researcher collect clear and sufficient data from all the categories affected by the teaching and learning of agriculture in each school.

Sample size.

The researcher sampled a cross-section of respondents in each school, employing both qualitative and quantitative methods. Students from S. 1 to S. 4 were randomly selected to ensure that each group of the targeted population was well represented in each sample. This led the researcher to come up with a sample size of 2 students chosen from each class, the 2 teachers of agriculture who specifically teach it in the sampled classes, and the headteacher of each of the sampled schools. The total sample size in this research from the population samples of the five schools selected in Bitooma Sub-County was 40 students, 10 teachers of agriculture, and 5 headteachers. These were the samples that were used in collecting the data concerning the factors affecting the teaching and learning of agriculture in the five selected secondary schools in Bushenyi District, Bitooma Sub-County.

Instruments of the study.

The researcher used questionnaires, interviews, and observation methods in the study.

Data analysis.

All the data was collected, categorised, tallied, and processed manually. Qualitative data was analyzed through both inductive and deductive logic. Premises were thus set, and references were made based on them. The quantitative data was analysed through simple measures of location (mean, mode, and median). Relationships were analysed through the tabulation of the data collected from the respondents.

RESULTS

The study was conducted in the following secondary schools:

- i. St. Francis Vocational Secondary School.
- ii. St. Mary's Vocational Secondary School.
- iii. Comboni Secondary School.
- iv. Kyamuhunga Secondary School.
- v. Katunga Vocational Secondary School.

During the study, a number of respondents were interviewed through interviews and questionnaires. They included the headteachers, teachers of agriculture, students, and the public. Students were sampled at random from S.1 to S.4. Critical observation was done by the researcher, and the findings were clearly recorded. Results from different categories of respondents are now reported below:

Headteachers' response.

In Kyamuhunga Secondary School, the headteacher gave a report that in 2010, one agriculture teacher was transferred, and students spent the whole term without learning agriculture. As a result, those who had interest lost morale. It is therefore important to note that some of the problems faced in the teaching and learning of agriculture in secondary schools include a lack of enough teachers for teaching agriculture, as evidenced in Kyamuhunga Secondary School in 2010. The head teachers of the selected schools reported that there are few students who opt to continue with agriculture at the UCE level compared to other optional subjects. Below is a table showing the number of students who like agriculture most from S.1 to S.4 from 2007 to 2010.

Table 1: Students who like Agriculture most from S.1 to S.4 in the selected schools

Year	No. of students	%
2007	48	15
2008	60	19
2009	84	27
2010	120	39
Total	312	100

From the above table, the researcher confirmed that the number of students who like agriculture is generally increasing from year to year.

Instructional materials

The table below shows the distribution of essential instructional materials among the students in the five selected schools.

Table 2: Table showing the distribution of essential instructional materials in the five selected schools

Item	No. of students who owned	No. of students who did not have	Percentage of those who owned.
Agriculture text books	20	120	14.2
Pamphlets	10	95	9.5
Agriculture guiding questions.	4	63	6.0

From the table above, it was realized that most schools do not have text books for students to use in classes or at home to do their own revision. Generally, the percentage indicates that agriculture reading materials are insufficient in all schools among the learners. Insufficient reading materials reflect the low number of students who like agriculture because it needs constant revision, and learners fail to get more interest due to a lack of materials to read on their own. Therefore, there is a relationship between the availability of instructional materials and effective teaching and learning. This is one of the problems encountered in the teaching and learning of agriculture in secondary schools. However, the observation made by the researcher found that all five schools had reasonable chalkboards and some reading materials. Some teachers lacked reference books.

Qualifications of agriculture teachers

In this case, the findings of the researcher about qualified teachers were difficult to get directly from the individual teachers. The researcher therefore had to use personal observations assisted by the headteachers, who availed themselves of the teachers' qualifications. The table below shows the number of agriculture teachers and their qualifications in the five selected secondary schools.

Table 3: Table showing the number of Agriculture teachers and their qualifications

Qualification	No. of teachers	percentage
Degree	00	0.0
Diploma (Grade V)	6	50.0
A'level	4	33.3
UCE certificate	2	16.7

From the above table, it was observed that half of the teachers are qualified to teach agriculture since 50% of the teachers were qualified. The rest, 50%, were O'level and A'level licenced teachers. Some other factors, apart from qualifications, can hamper effectiveness in teaching. Such factors include environmental, social, and financial. If, for example, teachers are not well motivated, they may not effectively teach. Also, if teachers are not provided with enough requirements in the form of scholastic materials, the hope for effective teaching and learning remains a myth, and this is a major problem encountered in teaching and learning agriculture.

Traditional bias

The respondents, most especially the students and parents, revealed that there is a general bias towards agriculture, which is mistakenly known as the dirty job of digging. It was revealed by parents that they do not encourage their children to study agriculture because of its colonial bad history with the colonialists, missionaries, and explorers who used agriculture as punishment for students and prisoners who were in the wrong. The

researcher therefore found out that there is a relationship between the prevailing traditional bias on agriculture and teaching and learning in secondary schools.

Lack of base from home, environment, and age group.

It was found out that agriculture as a subject lacks a base at home since many children hate digging before going to school. It would be better if these learners developed a love for agriculture at home so that they would love and learn it well at school, especially in secondary schools.

Attitude of the learners

In terms of motivation and encouragement from the parents, out of 120 students, 38 said that they get some encouragement from their parents, while 62 students reported that their parents say that agriculture is a hard subject, as shown by the table below. In this case, it implies that the majority of the parents do not give their children enough moral support towards the subject, and this leads to the setbacks encountered in teaching and learning agriculture. The table below shows the number of students who said that agriculture was either hard or not hard.

Table 4: showing attitude of students towards Agriculture.

No. of students	Attitude	percentage
72	Hard	60
48	Not hard	40
Total	120	100

From the table above, it is shown that the majority of the students find the agriculture subject hard. This is in line with what the majority of their parents say. Therefore, it implies that attitudes continuously tend towards the negative side among the learners as far as the subject is concerned. Most of the students complained of the following topics or sub-topics as generally very hard and confusing:

- (i) Agriculture Economics.
- (ii) (ii) Agriculture Machinery.
- (iii) (iii) Agriculture's Botanical Names.
- (iv) (iv) Agriculture Calculations.

Yet these topics and sub-topics are very important and provide the basis for the learners to learn agriculture.

Teachers' level of satisfaction with salary.

While in the field, the researcher tried to get a report from the teachers on their level of satisfaction with their salary and learning agriculture. The findings were recorded in the table below.

Table 5: Teachers' level of satisfaction with the salary.

Level of satisfaction	Number	Percentage (%)
Very satisfied	0	0
Satisfied	4	33.3
Not satisfied	6	50
Very unsatisfied	2	16.7
Total	12	100

Considering the findings in the table above, it was ironically found that the majority of the teachers indulged in other money-generating projects outside of teaching to complement their salary earnings, such as business activities and part-time work. In close relation to the above, when head teachers were asked whether agriculture teachers were readily available for consultations, findings revealed that sometimes they are absent doing other activities while giving reasons that they are sick. The fact that teachers are not satisfied with their salaries explains that they do not teach with settled minds, and this is one of the problems encountered in teaching and learning agriculture. The researcher further found out while in the field that teachers spend very little time with students and do not interact fully with the learners to find out their individual problems and assist them where necessary.

DISCUSSION

All in all, it was found out by the researcher that there are problems encountered in teaching and learning agriculture in secondary schools in Bushenyi District, Bitooma Sub-County. While in the field, the researcher found out that problems encountered in teaching and learning agriculture included a lack of industrial materials, such as text books, for both the learners and teachers. Therefore, the learners are not able to revise on their own and do homework [13-16]. This was revealed by Table 2, which shows that 14.2% had agriculture textbooks, 9.5% had pamphlets, and 6.0% had guiding revision questions. This is one of the major problems faced, and it affects the interest of students taking agriculture. It was further found out by the researcher that many teachers are not satisfied with their salaries, and this led them to do other income-generating activities such as coaching, farming, and part-timing; thus, little time was given to their students, which affected the teaching and learning process of agriculture. The researcher also, while in the field, found out that there is a traditional bias in agriculture originating from the parents, and this is also one of the problems encountered in teaching and learning agriculture [12]. However, it was found out that the few agriculture teachers available are qualified, although they discourage students from believing that it is difficult. As regards the subject of study and the problems faced in teaching and learning agriculture, the researcher recommends that more agriculture teachers should be trained and employed. This can be done through NTCs and universities, and it would solve the problem of a lack of qualified teachers so that once a teacher has been transferred, as was the case in Kyamuhunga Secondary School, teaching and learning should continue. This would also bring about the full interaction of individual students with their teachers. Schools should be stocked with adequate teaching materials like textbooks, pamphlets, and guiding revision questions so as to enhance effective teaching and learning in agriculture. The government should also improve the teaching of agriculture in secondary schools, as the Ministry of Education has already provided reading materials and the syllabus is in place as well. Head teachers should as well make agriculture reading materials a priority among the votes they make for buying school text books. The government should try as much as possible to improve the teachers' remuneration. This will motivate teachers to work at ease without moving elsewhere, such as to business or part-time, to generate more income. This is evidenced by Table 5, which shows that most teachers' level of satisfaction with their salary was low. The parents should really play a positive role and encourage their children to learn agriculture as a second national. Parents should not discourage their children by telling them that agriculture is for policemen and thieves, as was found out by the researcher in the field [10]. The government, through the Ministry of Education, should encourage the teaching of agriculture in primary schools so that when students join secondary schools, they should not see it as totally new or as a foreign subject. Teachers should as well use a variety of their teaching methods so that students should not label some topics or sub-topics as very difficult since it was found out by the researcher while in the field that in almost all the five selected schools, students identified topics like agriculture economics, agriculture machinery, agriculture's botanical names, and agriculture calculations as very difficult to learn while they provide the base for the subject and are very important. To avoid problems faced in teaching and learning agriculture in secondary schools, teachers should really have a personal touch with the learners who may not be doing well. They should encourage them to keep trying and counsel them on how the subject can be handled. Hence, teachers play a vital role in bringing up effective teaching and learning in agriculture. Discipline is also a requirement for all the students. Therefore, parents and teachers should hand in hand model students upright so that they can be obedient, which enhances effective teaching and learning. Finally, the National Curriculum Development Centre (NCDC) should come in and examine the supply of agriculture reading materials in schools. Teachers should be financially assisted by their headteachers and heads of departments so that they can improvise and write learning materials for their students. If the above recommendations are adopted and applied, we shall have done away with some of the problems faced in the teaching and learning of agriculture in secondary schools. Subsequently, agriculture will be a popular subject, and many students will develop an interest and like it most.

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