

Importance of Professionalism and Work Ethics in Agricultural Education in Botswana: Pre- and Post-Independence

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Abstract

Highlighting the importance of concepts of professionalism and work ethics in agricultural education in Botswana before and after the country achieved its independence is crucial in the education system. The purpose of this study is to explore the concept of professionalism and work ethics in the history of teaching and learning of agriculture in Botswana. The paper focuses on using the discussions raised in agricultural education development capturing the period prior to 1966 (Bechuanaland protectorate), and immediately after 1966 to the period of the 21st century. Professionalism and work ethics in agricultural education provides an analysis on growth and progress in the profession. It can be safely argued that different stakeholders who were instrumental in revolutionizing the evolution of agricultural education in Botswana needed to integrate professionalism and work ethics in the program.

Keywords

Agriculture, Agricultural Education, Work Ethics, Professionalism, Pre- and Post-Independence

1. Introduction, Background, and Justification

This article will address and discuss the concepts of professionalism and work ethics in the teaching and learning of agriculture in schools before and after Botswana achieved its independence for the progress and development purposes of the education system in this country. The study discusses the history of agricultural education, documenting evidence of professional work ethics and comparing progress made in pre- and post-independence. Progress of agricultural

education in the education system of Botswana has appeared to be relaxed but a bumpy and unpredictable path (Hulela and Miller, 2003; Rammolai, 2009) worth documenting. It can be noted that agricultural education in school's curriculum for Botswana was prompted by among other factors the tradition and culture of rearing of livestock and growing of crops by the people of the Bechuanaland protectorate since 1885. Much of the population of Botswana have had the privilege to be traditional subsistent farmers and therefore agricultural education became a highly recognized program in the education system in the context of growth and development with the hope that it would contribute knowledge, skills and attitudes as well as employment opportunities.

Studies by Rammolai (2009), Squire (2009), Baliyan et al. (2021), Moakofi et al. (2017) show that within agricultural education in the country, there are some challenges affecting the teaching and learning of agriculture to include teacher morals, values, and ethics. Concerns have also been raised regarding resource availability for school agricultural education programs particularly in the form of inadequately prepared teachers in schools. In addition, after more than 50 years since the country attained independence in 1966 (Suping, 2022) predictions about its contributions towards human resource development (Pheko and Molefhe, 2016) and the global emerging issues of poverty, climate change, unemployment, skill development (FAO, 2017) are not explicitly clear on their progress, let alone professionalism and ethical issues. Where the profession of agricultural education is now, one cannot make a supposition because as found by Pheko and Molefhe (2016) research on employability and other socio-economics issues is negligible and inaccessible thus creating a critical challenge for the country. The historical framework of agricultural education shows that it was well supported on sound grounds and justification for its inclusion in the school curriculum during the protectorate and post-independence eras. It can be argued that different stakeholders who were instrumental in revolutionizing agricultural education in Botswana made effort to integrate professionalism and work ethics in the program.

Agricultural education has since become a component of the education system thus requiring professionalism and work ethics' encompassing personal and corporate standards of behaviour expected of any professional body. There are no doubt that teacher education programs prepared teachers since its establishment in schools prior and after 1966. What needs to be done is to ensure the integration of professionalism and work ethics principles formalized to enhance teacher education through short courses, workshops, and in-service training.

This shows that agricultural education in Botswana is one area that is made up of proactive teachers and educators who have been influential in activities of rural development (farming), small businesses' (entrepreneurship) and extra-mural curricular (sports) in schools who form an active positive group of individuals in primary and secondary schools. However, as implied in the findings of a study conducted by Rammolai (2009), it was revealed that agriculture and its image

has begun to regress because of the inadequacy of trained teachers' limited perception that agriculture is basically about food production and very little reinforcement of practical relevance to students' needs are exercised. Rammolai (2009) further cautions that practical instruction should not be used as intensive manual labour but should be used to target specific technical and professional skills that are needed in the agricultural industry. These include 21st century skills that encompass professionalism and ethics principles.

In recent developments, administration, management, and practices of school subjects, agriculture is grouped with other practical subjects, a motive that minimizes advancement and progress of teachers as managers under the auspices of practical subjects not adding value to the profession of agricultural education. By standards teachers should have broad and complete knowledge and skills needed for licensing in the profession, to help learners meet the challenges and opportunities of the twenty-first century. At the beginning of the 21st century, two noticeable observations became apparent in agricultural education, making it clear to many that professionalism and work ethics in teaching the subjects would be compromised if not a forgone conclusion.

2. Purpose of Study

The purpose of this study is to document evidence of professionalism and work ethics in the teaching and learning of agriculture in schools before and after the country achieved its independence. The study is an evaluation of the progress of professionalism and work ethics in the field of teaching and learning since agricultural education was introduced in schools. Specifically, this study will explore the following objectives:

- 1) To describe/review/discuss the history of agricultural education of the pre- and post-independence era.
- 2) To document the evidence of professionalism and work ethics progress in the teaching and learning of agriculture in Botswana.
- 3) To compare progress made before and after independence in the teaching of agriculture.

3. Design of the Study

“According to Serena Balfour (Nee McConnel) the founder of Tutume McConnel Community between 1968-1970 personal electronic communication, January 23, 2024) the model of education was meant to sustain the students and teachers who had no regular supply of food. Serena Balfour further explained that the school was established with half of the land intended to grow vegetables and gran crops, raise cattle and technical education (brigade education). Ms Balour further stated that ‘we had some wonderful volunteers’ young teachers from Denmark, United Kingdom and Sweden interested in maintaining the school farm and since we depended on it for our food. The farm became a necessity for our students to learn about farming” she said.

This is an historical study compiled through desk research exploring the un-

derstanding of professionalism and work ethics behaviours in agricultural education during the pre- and post-independence. Historical studies as described by Coreil (2008) are used in social sciences to understand progress and relationships between constructs. According to Green and Cohen (2021), desk research design ensured data is derived from secondary sources that do not require direct contact between the researcher and participants. The study used data that is perceived to be indirectly not complicated to infringe into human resource subjects.

The existing literature reviewed, included policy documents of the Ministry of Education such as school agriculture syllabi, teacher education for colleges, (primary and secondary teachers), informal discussions with teachers of agriculture and senior citizens of the ministry of education, journals, and policy documents. Some examples and illustrations were drawn from experience and previous research into agricultural education stories of the Bechuanaland protectorate and after independence experience. This study provides evidence of work ethics and professionalism indicators.

The history of agricultural education of the pre- and post-independence era in Botswana

This is described in three stages, before, during and post missionaries' era.

Stage 1: In the period prior to the arrival of missionaries, some forms of cultural informal education existed within the Bogwera and Bojale initiation schools for girls and boys before and after the Bechuanaland protectorate were formed in 1885. The informal cultural activities taught to women and children include womanhood skills, domestic and agricultural activities, sex and behaviour towards men and women, home management skills that include sewing, cooking, carving mortars, and making tools like hoes, axe handles for cultivating the soil or weeding, and weaving beads. This type of education lay the basis for values within the professional guiding principles expected from learners. The result was that women qualified for motherhood and marriage teaching while boys were introduced to hunting and livestock rearing—traditional living skills based on gender (Moorad, 1993; Mafela, 1994). Based on this form of education professionalism and work ethics progressed on the basis of ideas and model of education of the era. Boys and girls developed some ethics through initiation schools.

Stage 2: The period called the Bechuanaland Protectorate era (the missionary involvement period) can be equated to the colonial education during which different missionaries were in the Protectorate. History shows that Missionaries arrived at different times in the protectorate with the goals of teaching the Christianity and health services. In this period, to achieve their goals, the majority of the missionaries' established schools with small farms/gardens to teach agricultural science vocations and academic skills for food provision to local families hence the introduction of agriculture (agricultural education) coupled with the Christian curriculum.

Based on Moorad (1993), the establishment of the teaching and learning of

agriculture in mission schools in this era was not based on professional development knowledge and skills on agriculture. This was based on what could be termed “request for practical subjects to be offered as the need for curriculum development to go beyond scriptural and into ‘Industrial Education’”. According to Moorad, the education was anticipated and perceived to benefit the rural families and community”, hence it was community-based education (Moorad, 1993). In this period, schools were created as a way of socialising children into the accepted values and norms of society and preparing them for their later adult roles. For example, as pointed out by Wass (1972), Moorad (1993), the establishment of Moeng College was conceptualized in the 1930s as an initiative of the Bamangwato people of the Bechuanaland Protectorate and became successful after the Second World War. The goal of this school according to Wass was for the advancement of African children through higher education and training hence the establishment of a large farm with agriculture infrastructure. Regarding Moeng College, Moorad (1993) stated that “the school offered courses in agriculture, animal husbandry, mechanics, building, carpentry, bookkeeping and typing. It had a farm and typified a real community situation where the students were all expected to take part in the farm activities” (p. 65).

Wass (1972) further explained that around 1935 when Moeng was being planned for, in the then Director of Education H.J.E. Dumbrell report of 1935, a proposal for the development of adult schools to cater for the needs of men and women who could only attend in the late afternoons and evenings was made. According to Wass, the Dumbrell report referred to the Dutch Reformed Church’s success story in Mochudi and the Kalahari village areas which had established adult schools successfully without assistance with the desire to learn. The report expanded the idea of adult schools to use the services of other Departments to ensure adults were taught things of real value, specifically mentioning agriculture related fields of Agriculture, Medical and Veterinary. This marked the birth of agricultural science in schools’ or the school curriculum in the Bechuanaland Protectorate.

Nkomazana and Setume (2016) wrote that of all missionaries, the London Missionary Societies (LMS) then referred to as the United Congregation Church of Southern Africa (UCCSA) are believed to have arrived in the southern African region as early as the 1800s. They first established Tiger Kloof Educational Institution in Vryburg, South Africa, before crossing into Bechuanaland Protectorate to start Moeding College at Otse in the Southeast of Botswana in 1962. The curriculum at Moeding College in the protectorate was informed by that of Tiger Kloof in South Africa which according to Arko-Achemfuor (2014) applied the principle of *education with production* raising of vegetable gardens and rearing of cattle. Agriculture formed the core-curriculum before and after 1966 at Moeding College in Botswana.

In 1801, another group of missionaries called the Dutch Reformed Church settled at Mochudi, founded by Rev. Henri Gronin which began working in 1863, to start the first home craft school to prepare women for home living. The

online history of St Theresa mission school in Lobatse, as described by [Sumani \(2017\)](#) also shows that the Zambezi mission by the Roman Catholic Church missionaries' decree signed by Pope Leo XIII in 1879 entrusted to the Society of Jesus to kick-start the missionary work in Bechuanaland Protectorate. These missionaries arrived in Tati, in the Northeast of the protectorate rear Rhodesia now Zimbabwe, on the 17th August 1879. This took a while before the establishment of the Roman Catholic Church (RCC) mission at Khale Hill in 1923. The missionaries at Khale Hill then started the Adolescent Training Centre in 1934 as summarized by [Hulela and Miller \(2003\)](#) to teach agriculture with boys only and started a large farm of 1000 Acres, with livestock, orchard trees and crops such as maize, peas, sorghum, potatoes, pasture, teff, and cowpeas. According to [Bayani \(2015\)](#) the Lutheran Missionaries arrived in Botswana as Hemansberg missionary society in 1957 as invited by the president Andres Pretorius of the Transvaal in South Africa.

Stage 3: The pioneers' era also overlaps with the missionary era: As mentioned by [Moorad \(1993\)](#) even though a mention is made that Agricultural Education was first introduced in schools through Missionaries, two pioneers such as Kgalemang Tumediso Motsete and Pratrck Van Rensburg also played a significant role in the 1930s and 1960s respectively. The first of these pioneers associated with this historiographical or historic role in history during the Bechuanaland Protectorate era was identified as Kgalemang Tumediso Motsepe. This distinguished Botswanan citizen, established a mixed school called Tati Training Institute as the first secondary school in the North-eastern part of the country that later moved to Nyewele in Tshesebe in 1932 on political grounds. According to [Melczer \(2019\)](#), Motsete's mixed school offered agriculture as a key subject in the curriculum occupying one-third of the space in the school curriculum. Second in this stage of pioneers and movers was Henry James Edward Dumbrell, then Director of Education who proposed agricultural science to be studied as part of the education curriculum ([Hulela and Miller, 2003](#)).

Third in this notable educational historical venture was Patrick Van Rensburg who arrived in the Protectorate in the early 1960s just before the country achieved independence in 1966. Van Rensburg, a South African by birth settled in Serowe with the intention to establish a progressive form of education at Swaneng Hill School, Madiba secondary school in Mahalapye and Shashe River schools in Tonota near Francistown. The three schools were started to admit primary school leaving examination (PSLE) standard seven dropouts. The school's curriculum and subjects placed emphasis on practical subjects' including agriculture, building, carpentry, metalwork, technical drawing and typing. The Van Rensburg approach to agricultural education was revolutionary and perceived to be a radical model of education at that time as the three schools established were attached to farms, encouraged learning by doing which was modelled as education with production in Botswana that included idiosyncratic forms of vocational training: on-the job education and active production for the community around schools.

The pre-independence era of agricultural education saw some pioneers playing a momentous role in the development of agricultural education. Throughout the Bechuanaland Protectorate era as indicated by Moorad (1993) and Rammolai (2009) the teaching and learning of agriculture in schools was characterized by the missionaries and some key individual pioneers made significant contributions to the development of agricultural education in the country. One historic moment worth noting is the formation of the then University of Basutoland, Bechuanaland and Swaziland (UBBS). According to the University of Botswana (2023 website), UBBS was formed on January 1, 1964, following an agreement reached in the mid-1962 between the High Commission of the then three British protectorates (Territories) together with the Oblate of Mary Immaculate of Pius XII Catholic University, Roma, Lesotho. Through this development the Swaziland Agricultural College of Luyengo in then Swaziland with the University, became the Swaziland Agricultural College and University Centre and teachers of agriculture were trained later after 1966. At least by 1966, agriculture was taught at Moeding College established in 1962, Moeng College in 1949, St. Joseph's college established in 1923, and Mater Spei College (1964) which had agricultural farms by 1966 (Hulela and Miller, 2003). These schools taught agricultural activities as part of the extra-mural curriculum which was used for manual work and for punishment of students with no formalized assessment.

Post-independence era:

When the country reached the close of the Bechuanaland Protectorate era to become a new independent state called "Botswana", the teaching and learning of agriculture was offered at Moeng College, Moeding College, St Joseph's College and the three schools Swaneng Hill school, Madiba school and Shashe River school. There was a proposal for integration into the new education system, modernized and re-structured to become an integral part of the school curriculum. This occurred because at that point in history, agricultural education within the curriculum was scant characterised by minimal assessment. In 1970 McConnell College was established in the rural village of Tutume in the central district and agricultural science was strong in the curriculum supported with the brigade education and a farm for the teaching of agriculture.

During the same year, the LMS also expanded its mission and set up Maun secondary school along the Thamalakane riverbanks in Maun with a large farm for agriculture (orchard, vegetable production, dairy cattle, and field crops).

In 2021, Maun Senior Secondary School is piloting the Multiple Pathways project with the support from the European Union (EU), Technical Vocational Education and Training (TVET) programme together with Moeng College in the central district. The project as indicated by the government intends addressing employability issues through the outcome-based education using agricultural education. The model of education at McConnell College and Maun portrayed the education with production introduced by Patrick Van Ransburg which existed in the last part of the protectorate and post-independence era schools established between 1965-1967.

According to Hulela and Miller (2003) the story of agricultural education soon after the independence rapidly started because of the review of the entire education system by the government of Botswana that produced the *1977 Education for Kagisano policy* to enhance the balance or imbalance in the school curriculum. Through this policy, *Agriculture* became compulsory subjects in junior secondary schools, an option to senior school students while it remained part of environmental science in primary schools' curriculum. Post-independence developments affecting agricultural education can be outlined on yearly basis to include the following:

1) **1976-1977:** A government national survey was commissioned that emerged with a National Policy on Education called the 1977 Education for Kagisano policy which raised the standards for practical subjects for inclusion in the curriculum such as the learning and teaching of agriculture. The new Botswana needed a plan for maintaining long-term development based on 4 principles of democracy, development, self-reliance, and unity as outlined in the Policy for Social Harmony' (*kagisano*) as a philosophy of education (Makwinja, 2017).

2) **1977: Establishment of the office of agricultural education** in the Ministry of Education where Dr. R. I. Sibanda a native of Zimbabwe was hired to manage the office of agricultural education ensuring teachers were developed. This has since been expanded to have officers in ten districts or regions.

3) **1977: First local teachers' arrival from training:** The initial teacher development (pre-service) became a priority when the first seven trained local teachers arrived, 3 from Egerton University, Kenya and 4 others from the University of Botswana and Swaziland (UBS) to start teaching in 1977. At least 31 teachers were prepared between 1977 and 1980 that marked the beginning of the training of agriculture science teachers up to diploma qualification level at university. **Table 1** shows a list of local teacher pioneers in agricultural education of which sixteen percent (16%) were female (♀) with one (3%) of the total of 31 pioneer teachers no longer in live. The program was in line with the joint initiative by the three British protectorates, Bechuanaland, Basutoland and Swaziland supported by the British and offered at the University of Swaziland, Luyengo Campus. This has since ceased when the two countries officially ended the relationship fully in 1982.

4) **1977-late 1990s: Foreign agricultural science teacher recruitment:** a strategy that was used to close the gap on the shortage of teachers in agriculture as the agricultural education became compulsory in schools. This strategy engaged teachers from countries such as Swaziland (Eswatini) Zambia, Zimbabwe, and USA as Peace Corps teachers, Ghana, Liberia, Kenya, Uganda, Canada, Germany and the United Kingdom. This strategy was also supported through USAID through Peace Corps volunteer teachers. The recruitment was based on technical knowledge of the subject of agriculture science and not professional training to teach the subject.

Table 1. Teachers of Agriculture trained between 1977 and 1980 (♀ = Women; **denote not in life).

<i>Group/Category</i>	<i>Name of teacher</i>	<i>Institute graduated</i>	<i>Year graduated</i>
First group trained in Kenya (3)	Mathhare, Cornelius	Egerton university, Kenya	1977
	Sekonyane, Thema Bush	Egerton university, Kenya	1977
	Seetswane, Anthony Onthusitse	Egerton university, Kenya	1977
First group trained in UBS (4)	Chakalisa (Nee Mara), Izhani ♀	University of Botswana & Swaziland (UBS)	1977
	Gaborone, Musa ♀	University of Botswana & Swaziland (UBS)	1977
	Mmereki, Dickson	University of Botswana & Swaziland (UBS)	1977
	Rantabe, Texan	University of Botswana & Swaziland (UBS)	1977
Third group (4)	Mosetlhi, Taolelo	University of Botswana & Swaziland (UBS)	1978
	Mothobi, Talibona	University of Botswana & Swaziland (UBS)	1978
	Phalaagae, Wison	University of Botswana & Swaziland (UBS)	1978
	Rampha, Sekgele	University of Botswana & Swaziland (UBS)	1978
Fourth group (10)	Balule, Levy	University of Botswana & Swaziland (UBS)	1979
	Chengeta, Johnson	University of Botswana & Swaziland (UBS)	1979
	Chesango, Elias**	University of Botswana & Swaziland (UBS)	1979
	Kgaribe, Alphonse	University of Botswana & Swaziland (UBS)	1979
	Koosimile, Godfrey	University of Botswana & Swaziland (UBS)	1979
	Mokete, Leano	University of Botswana & Swaziland (UBS)	1979
	Mguni, Ruth ♀	University of Botswana & Swaziland (UBS)	1979
	Morwaeng, Benson	University of Botswana & Swaziland (UBS)	1979
	Motlhabane, Haniso (PhD)	University of Botswana & Swaziland (UBS)	1979
	Ntsosa, Seteng	University of Botswana & Swaziland (UBS)	1979
Fifth group (10)	Dithobolo, Justice	University of Botswana & Swaziland (UBS)	1980
	Kgotlela, Toshi	University of Botswana & Swaziland (UBS)	1980
	Koosimile, Godfrey. G	University of Botswana & Swaziland (UBS)	1980
	Machacha, Sifanele	University of Botswana & Swaziland (UBS)	1980
	Malambe (Nee Nhlabano), Irene Siphon ♀	University of Botswana & Swaziland (UBS)	1980
	Mmolawa, Jerry	University of Botswana & Swaziland (UBS)	1980
	Selema, Texas	University of Botswana & Swaziland (UBS)	1980
	Serumula (Nee Manthe) Roseline Tomorrow ♀	University of Botswana & Swaziland (UBS)	1980
	Molau, Maco	University of Botswana & Swaziland (UBS)	1980
	Kwerepe, Thato	University of Botswana & Swaziland (UBS)	1980
Total teachers trained	28 + 3 = 31 Teachers		

Source: Compiled from interaction with former teachers.

5) 1977: The 1977 Education for Kagisano policy. Agriculture was made one of the compulsory subjects in junior secondary schools, with an option to senior school students while it remained part of environmental science in primary schools' curriculum. The first teaching materials were developed by pio-

meer teachers, such as Handbook for agriculture class notes, Agriculture for Botswana textbook, and 2 syllabi for the Cambridge Overseas School Certificate (COSC) were offered, Syllabus Cambridge O Level Agriculture Science 5037 and Syllabus Cambridge O Level Agriculture 5038.

6) 1980s-date: Community Junior Secondary School (CJSS) Agriculture infrastructure development and expansion of senior schools: This period was characterised by infrastructure development such as school gardens for vegetable and field crop production, livestock animal handling pens (kraals), poultry house structure, fishponds, tool sheds, development of vegetable plots, orchards, and water reticulation standpipes in school gardens. The junior secondary schools' agriculture science teaching benefited from infrastructure development provided through the Boipelego Project—a unit that existed under the auspices of the Ministry of Education. Such developments were meant for practical and hands-on learning purposes.

7) 1980-1990s: Curriculum/syllabus development: post-1966.

Agricultural education developed syllabuses and booklets, manuals and textbooks to guide the teaching of agriculture, primary, junior secondary schools and senior secondary school as well as the vocational agriculture for technical and vocational education. This was facilitated from a panel of teachers as they formed the Botswana Agriculture Teacher Association (BATA) to coordinate activities for school agriculture curriculum.

8) 1991-1995: The establishment of the diploma program/course in the agricultural education program at BCA/BUAN and the diploma in secondary education at Tonota College of Education for training teachers with a component of agriculture.

9) 1994: Approximately sixteen years later, Botswana's education policy was reviewed leading to the 1994 Revised National Policy on Education (RNPE). This revised policy recommended some diversification of the curriculum by incorporating among others foundational skills, the vocational orientation of the academic subjects, and practical subjects like agriculture.

10) 1997: Department of Teacher Training and development: was established to provide leadership and direction for in-service and pre-service teacher training including teachers to teach agriculture at primary and secondary schools. Teacher professional development was an emphasis in the RNPE which replaced the *Education for Kagisano* (Mphale, 2014).

11) 2007: Agricultural science was first examined as part of the Primary School Leaving Examination (PSLE) by the Botswana Examination Council (BEC). The first results of which were released in 2008.

Important achievements

A study by Mautle and Weeks (1994) also found that teacher development received the support from international organizations such as USAID which funded the upgrading and upskill of teachers of agriculture. According to Mphale (2014) both pre- and in-service (professional development) became an integral part of the overall school plan as facilitated through the 1994 RNPE. Statistics obtained

from the Botswana College of Agriculture (BCA)/graduation records show that between 1991-2011, BUAN has trained 519 Diploma teacher students, while a total of 468 graduated with BSc Agricultural Education between 1992-2011.

As alluded by [Amadi and Blessing \(2016\)](#) the role played by agricultural education in societies is countless in the provision of skilled personnel for the workforce, and in the establishment of vibrant research for farmers' continuous development of new knowledge. Agricultural education also ensures that young farmers clubs, rural development communities remain lively as it provides platform for active discussions and learning environment to meet the national food drive. Currently, it is estimated that each of the 33 senior secondary schools would have at least 7 teachers with BSc or above qualifications in Agricultural education (making 231 teachers). The 207 public junior secondary schools would each have approximately 6 teachers of which a total of 1260 teachers with diploma in secondary education and Bachelor's degree in agricultural education teach agriculture in public junior secondary schools.

Objectives 2: To document the evidence of professionalism and work ethics in the teaching and learning of agriculture in Botswana.

To respond to this objective, it is important to note that agricultural education practitioners in the Bechuanaland protectorate were not trained nor prepared as educators. According to [Paschal \(2023\)](#) teacher education plays an important role in the teaching and learning process because the profession of teaching is realized as the mother of all the other professions that are proven to happen in the universe (p. 82). According to [Pansiri et al. \(2021\)](#) generally, schools were supposed to be a safe place for learners but as found in their study unethical conduct in the education system in Botswana is heightened by lack of an Africanized ethical code of conduct for educators and double-dipping by the public officers. A study conducted by [Bagwasi \(2018\)](#) which traced the history of the education of Botswana from pre-independence to present has looked at among others policies that have influenced its development in relation to the western education system. The changes as alluded to have occurred in the education system after 1966 were noted to include teacher professional development. This study uses conceptualized professional ethics by [Paschal \(2023\)](#) as studied in Tanzania to assess their existence in the pre- and post-independence (**Table 2**). Analysis of literature revealed evidence of indicators of shortfalls of professionalism and work ethics issues of education as some have progressed from pre- to post-independence.

In a study conducted by [Moswela and Gobagoba \(2014\)](#) the findings revealed that teacher trainees were knowledgeable about what ethics and professionalism entail but that did not translate to practice as some teacher trainees still indulge in love affairs with students a situation that shun to professionalism and work ethics. Professionalism and work ethics in the teaching and learning of agriculture are important critical as participants (retired and on-the-job teachers), educators, community and historical documents perused through showed that pre- and post-independence agriculture has always been taught or performed

Table 2. Some indicators of professional ethics pre- and post-independence.

<i>Indicators of professional ethics</i>	<i>Pre-independence era</i>	<i>Post-independence era</i>	<i>Sources</i>
Subject knowledge	<i>No record</i>	<i>Evidence</i>	Subject teachers knowledgeable on matters related to subjects
Blending of instructional abilities and collaborative planning,	<i>No record</i>	<i>Evidence</i>	Traditional didactic methods used Traditional didactic methods still in place due to large class sizes for agriculture <i>Mungoo and Moorad, 2015</i>
Sexual harassment	No record	Evidence	Confirmed through behaviours such as of abuse, learner/teacher relationships leading to dropouts confirm, defilement (<i>Ramabu, 2020</i>)
Dropouts	Opportunity not provided	Evidence	San children dropouts for reasons of survival, both within and outside school (<i>Mokibelo, 2014</i>)
Inequality	Evidence	Evidence	Minority people were at risk and education challenged in education prior to 1966 (pre-independence), (<i>Marumo and Pansiri, 2016</i>) post-independence, inclusive education policy was adopted
Unprofessional behaviours	No record	Evidence	Child sexual abuse and children's safety existing in schools posing unprofessional and ethical issues. <i>Diraditsile and Rankopo (2018)</i> . Teacher' unprofessional behaviours including absenteeism and sexual relationships with learners reported (<i>Marumo & Pansiri, 2016</i>)
Insubordination and use of abusive language	Evidence	Evidence	Study confirmed teacher attitudes, corporal punishment, job satisfaction of teachers Students use vulgar language Exhibition of misconduct by students (<i>Enwereji, Mbukanma and Chukwuere, 2017</i>), indiscipline (<i>Garegae, 2008</i>)
Negligence of duty	No record	Evidence	BOSETU—increase in student violence against teachers, hazardous working environment (<i>Botswana Sectors of Educators Trade Union (BOSETU), 2020</i>). Study by <i>Pansiri et al. (2021)</i> , <i>Moswela and Gobagoba (2014)</i>
Lateness and absenteeism in school, No record attitudes	No record	Evidence	Students absenteeism 2005 <i>Masogo, 2015</i> <i>Kebalepile, 2014; Kelapile-Disang & Pansiri, 2023; Rammolai, 2009; Baliyan et al. (2021)</i>
Corporal punishment	Evidence	Evidence	Existed before 1966 but a policy designed to regulate corporal punishment after 1966, <i>Jonas (2012)</i> . See <i>The Global Partnership to End Violence against Children (2022)</i>
Drunkenness	No record	Evidence	Confirmed by study by IARD report (2017) final report alcohol consumer survey Botswana for international alliance for responsible drinking
Secularization	Evidence	Evidence	<i>Nkomazana and Setume (2016)</i>
Corruption and robbery	Yes	Yes	Corruption viewed as the existence of colonial policies and Opractices which are seen as forms of antisocial behaviours which can from the pre-independence. <i>Mulinge and Lesetedi (2002);</i>

Continued

Willingness to help students on things outside classroom	No record	Evidence
Attire to boost appearance and confidence,		

one or a combination of the following philosophical beliefs. According to participants agricultural education was introduced in Botswana education system with the belief that it 1) imparts knowledge and skills (behaviorism) to change, 2) prepares a child to enter a certain cultures in the society (conservatism), 3) building of existing knowledge/skill acquired at home (constructivism), 4) mastering a skill (essentialism) developed, 5) building on needs of a learner (humanistic) 6) usability of practical skills (pragmatism) and 7) active learning (progressivism). Based on philosophies held by stakeholders, the teaching and learning in agriculture was introduced with both practical and theory components administered and supervised during and after class hours.

Professionalism as described by [Creasy \(2015\)](#) is therefore an ideal situation described through several aspects and characteristics as shown in [Table 1](#) which individuals and occupational groups aspire, to distinguish themselves from other professional workers. According to [Lea \(2019\)](#) it has been found to have several understandings, rooted in disciplines of philosophy, sociology, and on studies of professions. To measure progress in professionalism about agricultural education in the history of Botswana to date, some characteristics borrowed from a study conducted by [Anitha and Krishnaveni \(2013\)](#) were utilised or drawn on to show evidence or no evidence from pre to post independent era. In a study conducted by [Lashgarara and Abadi \(2009\)](#) at Azad University in Tehran, in Iran, the findings indicated that more than forty characteristics of an effective agriculture teacher were categorised into areas of instruction, community relations, marketing, professionalism/professional growth, program planning/management, and personal qualities. Professionalism is also about the excellence and character of a teacher in the teaching environment. This would mean teachers having the knowledge, skills, personality, and practices that the teacher must acquire to be effective educator in the career of teaching the subject ([OECD, 2016](#)). This should not be seen to refer to wearing a suit or carrying a briefcase but instead should be seen to mean conducting oneself with responsibility, integrity, accountability, and excellence which also implies communicating effectively and appropriately in being productive.

In a story entitled *Mishandling agricultural practical projects in secondary schools in Botswana*, it is evident that agriculture is one of the secondary school subjects which to a certain extent has been compromised to what could be termed “teacher professionalism”. The article spells out that teachers of agriculture have raised as a concern the fact that practical assessment was not part of

their job description and therefore it must be removed from their supervising and assessment practical projects. Teachers' perception about their subject or profession is thus an important concept of professionalism. Teachers' roles and responsibilities include conducting instructions (both practical and theoretical) to teach students, enhance youth leaderships through integration into classroom instruction, imparting knowledge, and skills, creating plans and informing students about development in agriculture (Rice & Kitchel, 2016).

O'Sullivan, van Mook, Fewtrell and Wass (2012) view professionalism as having become important in the 21st century because professional values and behaviours are intrinsic to all practices yet remain one of the most difficult subjects to integrate clearly into curricular. Professionalism and code of ethics in teaching and learning of agriculture as indicated by the Uganda Ministry of agriculture, Animal Industry and Fisheries (n.d.) lies at the centre of development of the profession. As alluded to by Talbert, Croom, LaRose, Vaughn and Lee (2022), the profession like that of several other fields of education is an occupation that requires a long specific program of preparation and uses a code of ethics to guide the conduct of individuals in the profession. Teaching is one profession that needs an individual to act with integrity, show courtesy, respect to students, other educators, and stakeholders' one works with, and be responsible and accountable in all you are doing.

Work ethics. refer to the accepted morals, values, and principles of right conduct for a profession or area of service such as teaching agriculture. KAR (2016) states that these are standards or "rules" that enact obligations to refrain from committing a crime like missing classes, failing to listen to learners and colleagues in the job, stealing, cheating, committing malpractices, rape, murder, assault, refusal to perform a duty in the profession, misconduct, or fraud in workplace. In Botswana, teachers of agriculture in secondary schools work with small livestock, crops, and students as well as the community or parents of these children therefore the issue of ethics in agricultural education is important. In the past two or more decades, some changes, revolutions, conflict awareness have emerged coupled with malpractices, teacher absenteeism, abusive and violent behaviours of refusing with practical marks, sexual relationships, position abuse and several other factors have come up as forms of concerns in schools.

Zimdahl and Holtzer (2018) emphasise that, the classroom offers an effective starting place for ethical education and unfortunately the curricular offering or focusing on ethical principles their application in agriculture and related fields are rarely available in higher public institutions of learning. The authors continue that the courses on ethics should become a key component of agricultural education curriculum because these issues are increasingly a concern. For example, when taking into consideration the mishap that would occur in education where educators re-define their responsibilities and roles in teaching would explain ethics, to mean the rightness or wrongness of actions by an individual or a group of professionals (CAST, 2005). There are three secular ethi-

cal traditions or what theorists call theories explaining issues to do with civil, human rights, wrongs and privileges that exist and can be offered in teacher preparation.

The findings from [Zimdahl \(2000\)](#) revealed that out of the 59 universities in the United States of America which were surveyed, only fifteen (15) were offering agricultural ethics in their curriculum or as a topic in the agricultural curriculum. The study advanced several reasons why it is so uncommon for universities to embrace agricultural ethics in their curriculum that include lack of ethics and philosophical knowledge in the concept. According to [Elliott and June \(2018\)](#) ethics education became part of higher education in the past twenty-five years and today there are a good number of universities offering ethics education. Different courses are offered in different universities in the USA to instil the ethics of teaching and learning agriculture ([Elliott and June, 2018](#)).

In Tanzania for example as alluded to by [Mfaume and Bilinga \(2017\)](#) professionalism in education were attributed to teachers' low salaries and remunerations, poor living and working conditions, influence of science and technology, lack of professional knowledge and poor management and infrequent visits and inspections of schools. Professionalism could be related to educational policy reforms and practices in education on how they are managed to address teacher's needs and recruitment procedures, supportive policy environment and professional development ([Ifanti and Fotopoulou, 2011](#)). [Day & Sachs \(2004\)](#) also found that teachers engaged in work which has fundamental moral and ethical as well as instrumental purposes in teaching and learning. This is so because programs of education are changing professionally and ethically their day-to-day practices in school environment, conditions for working, teachers' structures, and teacher-to-students ratios have also changed. As indicated by Career development, agriculture teacher has a wide range of responsibilities as shown in [Table 3](#).

Table 3. Agricultural teacher responsibilities.

-
- Development of lesson plans, teaching materials based on syllabus. Curricula standards.
 - Guiding and counselling students on academic or behavioral challenges
 - Providing feedback on student progress to parents and administrators
 - Maintaining conducive classroom environment
 - Demonstrating safe machinery usage
 - Participating in school activities such as parent conferences, open houses, and field trips
 - Conducting research on agriculture or science education.
 - Conducting lessons on livestock, crop, farm management, climate change, food preparation, forestry, horticulture, nature science, soil science
 - Assess, and mark both practical and theory works of students taught.
 - Coach in academic and extra mural curriculum matters
-

Source: [Career Development \(2022\)](#).

4. Summary and Conclusions

1) This article is set to address and discuss the progress of the concepts of professionalism and work ethics in the teaching and learning of agriculture in schools before and after Botswana achieved its independence for the purposes of the education system in this country. The stages in the history of agricultural education are evidence of progress in professional responsibilities of a teacher (Creasy, 2015) reflecting teacher education, maintenance of accurate records, communicating with stakeholders (students, families, and others), working in, and contributing to the school and communities, growing, and developing the profession. Teacher education programs agreed upon with the building of dispositions or characteristics on which the teacher candidates would display in the profession.

2) Progress of agricultural education in the education system of Botswana has appeared to be relaxed but a bumpy and unpredictable path due to inadequate resources. Overall, the evidence of professionalism and ethics in agricultural education is key to development of agricultural education in terms of its expansion and contribution to the economy of any country. The review has revealed that both pre-service and professional education are critical in developing principles of professionalism and work ethics.

3) Teacher recruitment is the starting point for professionalism and work ethics in teaching. In developed nations some assessments strategies and standards apart from the degree qualifications that the potential teachers hold, would also be standards to be met used for teacher selection to ensure only individuals with high capability would enter the profession and used to control the degree of self-regulation and credentials.

4) Finally, teachers' recruitment criteria for example would be strongly recommended to build on teacher professionalism and further develop guiding standards for recruitment. According to Calvin and Pense (2013) there are five factors which appear to be a challenge and solutions to issues relating to recruitment into a career in agricultural education—time, the economy, family, technology, and image.

5) In conclusion, although it's easy to trace the history of agricultural education, it is not obvious on how professionalism progressed as there are no ethical standards and policies to measure the advancement. The program has already made some contributions socially, economically and culturally and it is the government's responsibility to monitor and maintain its strongholds while improving the weak areas that have to do with human resource development, limited capacity for policy development as well as infrastructure upgrading in education.

5. Conclusion

This paper has traced the progress of professionalism and work ethics in the history of agricultural education in pre- and post-independence Botswana. It has been evidently shown that the teaching of agriculture in pre-independence as

revolutionised by both missionaries, community and some pioneers progressed well with time but nowadays tend to regress as viewed by stakeholders and scholars. In the protectorate era, teaching and learning were based on traditional values and work ethics not dependent on professional development but respect, integrity, innovativeness, and drive/desire in those who performed the profession of teaching. The progress in professionalism has also been examined in the post-independence era and has shown that there have been some professional development actions to develop teachers for agricultural education starting with the group of 1976. Throughout the teaching and learning of agriculture in Botswana after 1966, professionalism and work ethics have played a central role for the progress and development of agricultural education. Some traces of behaviour changes of teachers of agriculture such as absenteeism/truancy in schools, teacher student affection relationships, and failure to mark or give feedback to students have been documented in particular secondary schools as some of the dilemma in this history. The assumption that students would be left in the garden or taken to the garden to conduct watering, seedling transplanting and cultivation of their plots in the absence of the teachers have been observed to be popular professional and work ethical issues in teaching agriculture.

Conflicts of Interest

The author declares no conflicts of interest regarding the publication of this paper.

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