

Effect of Supervisors' Specialization on Job Performance of Agriculture Science Teachers in Botswana Junior Secondary Schools

¹Molefhe L. and ²Oladele O.I.

¹Department of Agricultural Economics, Education and Extension, Botswana College of Agriculture, University of Botswana, Gaborone, ²Department of Agricultural Economics and Extension, North-West University Mafikeng Campus, South Africa. oladele20002001@yahoo.com

ABSTRACT: This paper examines the effect of supervisors' specialization on job performance of agriculture science teachers in Junior Secondary Schools. A simple random technique was used to select 49 agricultural science teachers and 13 supervisors. The teachers were divided into those whose supervisors specialize in agriculture science (ATAS) and those with supervisors do not (ATNAS). Data collected with a structured questionnaire that was face validity and has reliability coefficient of 0.92 were analyzed. The results shows that majority of ATAS and ATNAS indicated that a higher proportion of the supervisors who have the same subject specialization perform their supervisory roles than supervisors who do not specialize in the same subjects. Significant differences exist in the perceived effect of supervision ($F = 27.93, p < 0.05$) and between ATAS and ATNAS, on Supervisors' specialization ($t = 14.97, p < 0.05$), and job performance ($t = -3.00, p < 0.05$).

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Introduction

The education system in Botswana has undergone drastic development and expansion over the years. Schools as institutions are made to offer opportunities to develop and prepare students for the world of work and self – sustenance. Thus, agriculture was introduced in junior schools in order to educate and teach agriculture to younger people to contribute to food security and self employment. The government of Botswana has invested in developing the teaching of agriculture in schools. The materials, equipment, funds and teachers are allocated to schools every year to enhance the learning of agriculture. Supervision is, therefore, necessary to maintain standards and to ensure that the money and other resources are being used most effectively in the interest of students, and that students are exposed to improved teacher instruction (Malambe 2003 and Elegbeleye 2005). The drastic increase in number of students and teachers stretched the management capabilities by school heads such that the increase in the number and spread of educational institutions in the country, especially, at primary and secondary school levels poses a problem of effective administration in view of the centralized nature of the management structure (Teaching Service Management (TSM), 1994). The situation resulted in the initiation of decentralization of some supervisory roles at Ministry of Education and school levels. The restructuring of management in schools came up with the new scheme of service and job description for teachers. The paradigm shift was done with the hope

of improving supervision in schools and the creation of the head of department (academics) position in junior secondary schools was to meet the changed situations caused by the complexity of the curriculum. The diversity of the subjects required supervision in subject matter fields. The curriculum is divided into three categories namely: Sciences (Science, Agriculture and Mathematics), Humanities (Setswana, English, Social Studies, Moral education), and Practical subjects/options (Design and Technology, Art and Home economics). The head of department for sciences subjects is responsible for supervising agriculture teachers as well as teachers from other two subjects (Mathematics and Integrated Science). The head of department post is attained through application and teachers are interviewed by a panel of directors from the Regional Education Office. All teachers under a particular department are eligible for the post of senior teacher (head of department). The teacher should have given satisfactory service for at least two years as senior teacher grade two, and should have demonstrated leadership qualities. The experience acquired should be demonstrated in both teaching and administrative skills (Teaching Service Management, 1994). The teacher is also assessed on the level of knowledge of the education act, code of regulations, educational policies and problem solving pertaining to discipline in school and conduct of teachers. Then on the basis of the panel assessment, the teacher is entrusted with the supervisory roles in schools. The head of department is guided by the job description and scheme of service under supervision

of the deputy school head. The Teaching Service Management (2000) outlined that the head of department is expected to execute the following supervisory rules: coordinate work of the department, coordinates in – service programs, guides and counsel teachers, plan for class allocation, prepares order books, teaching aids and other resources for approval by the school head, organizes mock examinations and ensures that students are exposed to examination conditions as close as reality is possible, approves the preparation of scheme of work, keep records to correspondence relating to the department, ensures time management in the department, monitors standards of work in the department, act as point of contact for the ministry, comments on annual confidential reports prepared by for members of his/her department, trains subject coordinators to induct and support probationers more effectively, recommends time needs, convenes meetings in the department and attend meeting convened by the school head to discuss matters of school policy, submit departmental plans, undertakes the full range of teaching duties and other related duties to meet the objectives of the service. Sallis (2001) outlined these roles for effective supervision.

However, it has been observed that in most cases heads of departments (Sciences) supervise agriculture teachers but do not specialize and teach agriculture instead major in Mathematics or Integrated Science. The heads of agriculture department have been criticized for inefficiency in conducting lesson observations and teachers have complained of lack of support from head of department. It is therefore important to determine the effect of supervisors' specialization on the performance of the supervisees, as some supervisors in junior secondary schools supervise teachers of the subject they do not teach.

Materials and Methods

Southern District is one of the countries nine districts. It is located in Southern Botswana, also known as Ngwaketse District. The district's is on latitude 25°, 0'0''S, longitude 25°, 0'00'' E. It is a first administrative division with a population of 79888 and covers an area of 28 470km². Domestically

it borders the following districts: South East District, Kweneng District and Kgalagadi District. Major village and town in this district are Kanye and Lobatse. The study covered all seven junior secondary schools in Kanye and four in Lobatse. The targeted population was agricultural science teachers and their supervisors in Kanye and Lobatse Junior Secondary Schools. A sample of 49 agricultural science teachers were selected randomly and 13 supervisors of those agriculture teachers were used for the study to give a total sample size of 62 respondents. A structured questionnaire was designed and face validated among Lecturers in the Department of Agricultural Economics, Education and Extension was used to collect data for the study and contains sections on demographic characteristics of agriculture teachers and their supervisors. Job performance which was measured on 3 point Likert-type scale, Very effective = 3, effective = 2 and not effective = 1. Teachers' perception of the supervisors' specialization on supervision of Agricultural science in junior secondary schools anchored a 5 point Likert – scale of strongly agree = 5, agree = 4, undecided = 3, Disagree = 2 and strongly disagree = 1 and effect of supervision on job performance measured on a 3 – point Likert – scale, very effective = 3, effective = 2 and not effective - 1 was used. Data collected were analyzed with the SPSS programme using Frequencies and percentages

Results

Table 1 presents the demographic information of agriculture science teacher and supervisors, Table 2 shows the perceived effect of supervisor's specialization on supervision of agriculture teachers, Table 3 shows the effect of supervision on job performance, Table 4 and 5 state the job performance and roles of agriculture teachers. Table 6 shows the One way analysis of variance showing difference in the effect of supervision and job performance among ATAS, ATNAS and Supervisors, while Table 7 presents the t-test analysis showing differences between ATAS and ATNAS on effect of supervision and job performance.

Table 1: Demographic information of agriculture science teacher and supervisors

Variable	ATAS	ATNAS	Supervisor
Gender			
Male	17(65.4)	13(56.5)	11(84.6)
Female	9(34.6)	10(43.5)	2(15.4)
Age			
Less than 30	8(30.8)	5(21.7)	1(7.7)
31 - 35	15(57.7)	11(47.8)	8(61.5)
36 - 40	3(11.5)	6(26.1)	2(15.4)
More than 40	0(0)	1(4.3)	2(15.4)
Nationality			

Motswana	26(100)	22(95.7)	12(92.3)
Expatriate	0(0)	1(4.3)	1(7.7)
Educational Qualification			
Diploma In Agric Educ	18(69.2)	10(43.5)	7(53.8)
Bsc + PGDE	2(7.7)	9(39.1)	2(15.4)
Bsc Agric Education	4(15.4)	3(13.0)	4(30.8)
Other	2(7.7)	1(4.3)	0(0)
Teaching Experience			
Less than 5 years	9(34.6)	4(17.3)	3(23.1)
5 – 10 years	12(46)	12(52)	10(77)
Above 10 years	5(19.2)	7(30.3)	0(0)
Marital Status			
Single	17(65.4)	8(34.8)	8(61.5)
Married	9(34.6)	14(60.9)	5(38.5)
Tenure Status			
Temporary	7(26.9)	1(4.3)	1(7.7)
Confirmed	18(69.2)	21(91.3)	10(76.9)
On Probation	1(3.8)	1(4.3)	2(15.4)
Designation			
Senior teacher 1	2(7.7)	7(30.4)	1(7.7)
Senior teacher 11	1(3.8)	13(56.5)	9(69.2)
Agric. Coordinator	21(80.8)	3(13.0)	3(23.1)
Others	2(7.7)	0(0)	0(0)
Specialization or subject taught by supervisor			
Agriculture	26(100)	23(100)	8(61.5)
Other subjects			5(38.5)

Table 2: Perceived effect of supervisor's specialization on supervision of agriculture teachers

Perception	ATAS					ATNAS				
	SA	A	U	D	SD	SA	A	U	D	SD
Accuracy in developing departmental goals	8(30.8)	17(65.4)	1(3.8)	0(0)	0(0)	11(47.8)	12(52.2)	0(0)	0(0)	0(0)
Proper and detailed departmental plan	11(42.3)	9(34.6)	5(19.2)	1(3.8)	0(0)	6(26.1)	3(13.0)	14(60.9)	0(0)	0(0)
Innovative and technical aspects of production in school	7(26.9)	12(46.2)	5(19.2)	2(7.7)	0(0)	9(39.1)	11(47.8)	3(13.0)	0(0)	0(0)
Efficiency in lesson plan preparation	9(34.6)	17(65.4)	0(0)	0(0)	0(0)	8(34.8)	11(47.8)	2(8.7)	1(4.3)	1(4.3)
Accuracy in budgeting for the agric vote	9(34.6)	16(61.5)	1(3.8)	0(0)	0(0)	2(8.7)	5(21.7)	9(39.1)	7(30.4)	0(0)
Continuity in the evaluation of agric projects	9(34.6)	13(50.0)	4(15.4)	0(0)	0(0)	2(8.7)	5(21.7)	8(34.8)	8(34.8)	0(0)
Planning and preparation of educational trips	1(3.8)	8(30.8)	12(46.2)	1(3.8)	4(15.4)	5(21.7)	5(21.7)	13(56.5)	0(0)	0(0)
Equitable distribution of garden resources	12(46.2)	11(42.3)	1(3.8)	2(7.7)	0(0)	5(21.5)	1(4.3)	9(39.1)	8(34.8)	0(0)
Proper management of agric equipment	6(23.1)	18(69.2)	1(3.8)	1(3.8)	0(0)	7(30.4)	9(39.1)	7(30.4)	0(0)	0(0)
Implementation and management of projects	8(30.8)	16(61.5)	2(7.7)	0(0)	0(0)	2(8.7)	5(21.7)	9(39.1)	7(30.4)	0(0)
Guidance in use of teaching aids	7(26.9)	14(53.8)	5(19.2)	0(0)	0(0)	2(8.7)	10(43.5)	2(8.7)	7(30.4)	2(8.7)
Deliberations and time management during meeting	7(26.9)	17(65.4)	2(7.7)	0(0)	0(0)	9(39.1)	13(56.5)	1(4.3)	0(0)	0(0)
Check if teachers prepare scheme of work	17(65.4)	9(34.6)	0(0)	0(0)	0(0)	9(39.1)	13(56.5)	1(4.3)	0(0)	0(0)
The teacher teach student centered lessons	10(38.5)	10(38.5)	4(15.4)	2(7.7)	0(0)	6(26.1)	9(39.1)	2(8.7)	4(17.4)	2(8.7)
Arouse the interest of students in the lesson	9(34.6)	14(53.8)	3(11.5)	0(0)	0(0)	4(17.4)	9(39.1)	2(8.7)	6(26.1)	2(8.7)
Helped students to understand the importance of the lesson	9(34.6)	13(50.0)	4(15.4)	0(0)	0(0)	4(17.4)	8(34.8)	3(13.0)	6(26.1)	2(8.7)
The teacher taught students at all levels of thinking	5(19.2)	14(53.8)	5(19.2)	2(7.7)	0(0)	2(8.7)	11(47.8)	3(13.4)	7(30.4)	0(0)

Table 3: The effect of supervision on job performance

Effect of supervision job performance	ATAS			ATNAS			supervisor		
	VE	E	NE	VE	E	NE	VE	E	NE
Teach students	4(15.4)	17(65.4)	3(11.5)	2(7.7)	4(17.4)	19(82.6)	11(84.6)	1(7.7)	1(7.7)
Prepare lesson plan	16(61.6)	9(34.6)	1(3.8)	7(30.4)	15(65.2)	1(4.3)	9(69.2)	4(30.8)	0(0)
Develop teaching aids	14(53.8)	12(46.2)	0(0)	6(26.1)	15(65.2)	2(8.7)	3(23.1)	8(61.5)	2(15.4)
Assign and mark work for students	9(34.6)	16(61.5)	1(8.7)	2(8.7)	13(56.5)	8(34.8)	8(61.5)	5(38.5)	0(0)
Compile term reports and annual plans	16(61.5)	8(30.8)	2(7.7)	5(21.7)	13(56.5)	5(21.7)	6(46.2)	4(30.8)	3(23.1)
Attend departmental meetings	10(38.5)	16(61.5)	0(0)	5(21.7)	12(52.2)	6(26.1)	9(69.2)	4(30.8)	0(0)
Supervises students during practical	12(46.2)	14(53.8)	12(46.2)	8(34.8)	2(8.7)	1(3.8)	9(69.2)	2(15.4)	2(15.4)
Keep records of projects	13(50.0)	12(46.2)	1(3.8)	4(17.4)	4(17.4)	15(65.2)	6(46.2)	5(38.5)	2(15.4)
Manage garden tools properly	9(34.6)	14(53.8)	3(11.5)	3(13.0)	6(26.1)	14(60.9)	3(23.1)	7(53.8)	3(23.1)
Take text books inventory	11(42.3)	14(53.8)	1(3.8)	5(21.7)	3(13.0)	15(65.2)	7(53.8)	5(38.5)	1(7.7)
Prepare for agriculture fairs	2(7.7)	22(84.6)	2(7.7)	3(13.0)	3(13.0)	17(73.9)	5(38.5)	6(46.2)	2(15.4)
Follow schedule for feeding farm animals	11(42.3)	12(46.2)	3(11.5)	2(8.7)	5(21.5)	16(69.6)	7(53.8)	4(30.8)	2(15.4)
Take garden tools inventory	10(38.5)	12(46.2)	4(15.4)	1(4.3)	5(21.7)	17(73.9)	6(46.2)	4(30.8)	3(23.1)
Take animal husbandry inventory	7(26.9)	16(61.5)	3(11.5)	3(13.0)	5(21.7)	15(65.2)	6(46.2)	4(30.8)	3(23.1)
Assess students practical work	5(19.2)	21(80.8)	0(0)	3(13.0)	3(13.0)	17(73.9)	9(69.2)	2(15.4)	2(15.4)
Administer monthly tests	11(42.3)	12(46.2)	3(11.5)	6(26.1)	3(13.0)	14(60.8)	10(76.9)	3(23.1)	0(0)
Set end of year examinations	19(73.1)	6(23.1)	1(3.8)	12(52.2)	10(43.5)	1(4.3)	11(84.6)	2(15.4)	0(0)
Analyzes the examination results	19(73.1)	6(23.1)	1(3.8)	6(26.1)	15(65.2)	2(8.7)	9(69.2)	4(30.8)	0(0)
Regular checking of departmental facilities	14(53.8)	11(42.3)	1(3.8)	6(26.1)	8(34.8)	9(49.1)	5(38.5)	5(38.5)	3(23.1)
Organize educational trips	5(19.2)	20(76.9)	1(3.8)	2(8.7)	4(17.4)	17(73.9)	4(30.8)	2(15.4)	7(53.8)
Take part in purchasing stock feed	5(19.2)	14(53.8)	7(26.9)	5(21.7)	18(78.3)	0(0)	6(46.2)	7(53.8)	0(0)
Prepare scheme of work	8(30.8)	16(61.5)	2(7.7)	3(13.0)	4(17.4)	16(69.6)	9(69.2)	0(0)	0(0)
Fill in students' term and annual academic reports	15(57.7)	10(38.5)	3(11.5)	9(39.1)	8(34.8)	6(26.1)	6(46.2)	0(0)	0(0)
Monitor students attendance during practical	15(57.7)	8(30.8)	3(11.5)	7(30.4)	11(47.8)	5(21.7)	3(23.1)	0(0)	0(0)

Table 4: Job performance of agriculture teachers

Job performance	ATAS		ATNAS		Supervisor	
	Yes	No	Yes	No	Yes	No
Teach students	12(46.2)	14(53.8)	8(34.8)	15(65.2)	12(92.3)	1(7.7)
Prepare lesson plans	26(100)	0(0)	23(100)	0(0)	13(100)	0(0)
Monitor students attendance during practical	26(100)	0(0)	23(100)	0(0)	13(100)	0(0)
Fill in term and annual academic reports	26(100)	0(0)	23(100)	0(0)	13(100)	0(0)
Attend departmental meetings	26(100)	0(0)	23(100)	0(0)	13(100)	0(0)
Supervises students during practical	26(100)	0(0)	23(100)	0(0)	13(100)	0(0)
Keep records of projects	26(100)	0(0)	23(100)	0(0)	13(100)	0(0)
Take book inventory	26(100)	0(0)	23(100)	0(0)	12(92.3)	1(7.7)
Prepare for agriculture fair	24(92.3)	2(7.7)	19(82.6)	4(17.4)	13(100)	0(0)
Follow schedule of feeding farm animals	24(92.3)	2(7.7)	18(78.3)	5(21.7)	13(100)	0(0)
Take garden tools inventory	25(96.2)	1(3.8)	22(95.7)	1(4.3)	12(92.3)	1(7.7)
Manage garden tools properly	25(96.2)	1(3.8)	19(82.6)	4(17.4)	12(92.3)	1(7.7)
Set monthly and end of year examination	26(100)	0(0)	22(95.7)	1(4.3)	13(100)	0(0)
Take part in purchasing stock feed	26(100)	0(0)	23(100)	0(0)	11(84.6)	2(15.4)
Analyse examination results	26(100)	0(0)	21(91.3)	1(8.7)	9(69.2)	4(30.8)
Organise educational trips	25(96.2)	1(3.8)	16(69.6)	7(30.4)	8(61.5)	5(38.5)
Prepare scheme of work	20(76.9)	6(23.1)	16(69.6)	7(30.4)	13(100)	0(0)

Table 5: Roles of agricultural science teachers' supervisors

Supervisory roles	VE	E	NE
Working with teachers to develop strategies for improving student performance	5(38.5)	7(53.8)	1(7.7)
Submitting departmental plans to be included in the school master plan	7(53.8)	6(46.2)	0(0)
Work with teachers to draw departmental plans	5(38.5)	6(46.2)	2(15.4)
Communicate the needs of the department to the management of the school	9(69.2)	4(30.8)	0(0)
check if teachers prepare lesson plans	2(15.4)	7(53.8)	4(30.8)
Check if teachers assess students	4(30.8)	7(53.8)	2(15.4)
Conduct lesson observations	11(84.6)	2(15.4)	0(0)
Organizing induction workshop for new teachers	1(7.7)	3(23.1)	9(69.2)
Identifying teachers training needs	1(7.7)	1(7.7)	11(84.6)

Delegating responsibilities to teachers	2(15.4)	6(46.2)	5(38.5)
Making follow up on resolutions made in meetings	4(30.8)	4(69.2)	0(0)
Convening departmental meetings	4(30.8)	5(38.5)	4(30.8)
encourage teachers to attend classes on time	6(46.2)	4(30.8)	3(23.0)
Analyzing the examination results with teachers	11(84.6)	2(15.4)	0(0)
Influencing teachers to accept change	6(46.2)	7(53.8)	0(0)

Table 6: One way analysis of variance showing difference in the effect of supervision and job performance among ATAS, ATNAS and Supervisors

Variables		Sum of Squares	df	Mean Square	F	Sig.	Groups	N	Means
Perceived effect of supervision	Between Groups	4677.479	2	2338.740	27.93	0.00	SupV	13	34.07 ^a
	Within Groups	4940.408	59	83.736			ATAS	26	39.76 ^a
	Total	9617.887	61				ATNAS	23	55.30 ^b
Job performance	Between Groups	30.026	2	15.013	3.76	0.03	SupV	13	18.84 ^a
	Within Groups	235.344	59	3.989			ATAS	26	18.00 ^{a,b}
	Total	265.371	61				ATNAS	23	19.56 ^b

Table7: t-test analysis showing differences between ATAS and ATNAS on effect of supervision and job performance

	Groups	N	Mean	SD	SEM	t	df	p
Supervisors' specialization	ATAS	26	47.69	8.65	1.69	14.97	38	0.00
	ATNAS	23	18.78	4.42	0.92			
Effect of supervision on performance	ATAS	26	39.76	6.55	1.28	-5.98	35	0.00
	ATNAS	23	55.30	10.82	2.25			
Job performance	ATAS	26	18.00	0.89	0.17	-3.00	27	0.006
	ATNAS	23	19.56	2.35	0.49			

Discussion

From Table 1, majority of agriculture teachers those supervised by agriculture supervisors (ATAS) and non-agriculture supervisors (ATNAS) (65 and 56 percent respectively) and their supervisors 84 percent are male. The results indicate that males dominate in all the categories and might be due to past experience where anything related to agriculture was considered dirty and labour intensive thus suitable only for men. Therefore, they were favored by enrolling in agriculture education early where priority was given to men. In terms of age, while the supervisors' age is at least 31 years, majority of the teachers are less than 31 years. Leadership positions in Botswana junior secondary schools are held relatively by young professionals. Majority of agriculture teachers have diploma in Education (69.2%) because they are suited by entry requirement at diploma level but with long years of service. According to the results, 77 percent of the supervisors have teaching experience, ranging from 5 – 10 years, which is followed by 52% for ATAS and 46% for ATNAS. A study by Nkabule (1998) also found that teaching experience explained supervision effectiveness by agriculture coordinators in Swaziland. The Teaching Service Management unit in Botswana recommended that a teacher should have served for a minimum of two years in a post before

he/she is promoted, (TSM, 1994) and promotion is based on Performance Based Reward System (PBRs) which is based on job performance. As a result teachers are mostly employed on permanent and pensionable basis as revealed by the results, 91.3% of ATNAS are confirmed including (76.9%) supervisors and 69.2% of ATAS. In addition, probation period has been reduced from two years to one year. Parallel progression has automatically moved teachers from teacher post to senior teacher II with (69.2%) supervisors and (56.5% of ATNAS. Senior teacher I position has less number of teachers where teaching experience is required. Majority of agriculture teachers are coordinators (80.8%). Agriculture supervisors delegate responsibility to agriculture teachers as a way of developing them. Due to localization, large numbers (100%) of agriculture teachers are Batswana and 18.5% are expatriates specializing in other subjects yet supervising agriculture teachers. These characteristics would influence the professional roles of the teachers (Pajak and Blasé, 1989). This is in line with the TSM (1994) main objective of teachers education "to expand the supply of qualified Batswana teachers at both primary and secondary school levels and to ensure that staff are well motivated and effective."

Perception of the supervisor's specialization on supervision of agriculture teachers

To describe the perception of the supervisor's specialization on supervision of agriculture teachers, the results show that 65.4% of ATAS agreed that their heads of department are accurate in developing departmental goals, 65.4% perceive that the supervisors are efficient in lesson plan preparation, proper in management of agriculture equipment (69.2%) and check if teachers prepare scheme of work (65.4%). This is possible since supervisors are in their area of specialization. Furthermore, the results indicates that (52.2%) of ATNAS agreed that they are accurate in developing departmental goals, (39.1%) strongly agree that they are innovative and have technical aspects of production in school, agree that supervisors are good in deliberations and time management during meetings (56.5%), and (56.5%) agree that the supervisors check if teachers prepare scheme of work. Non agriculture supervisors are mostly Science or Mathematics teachers who always aim higher and make sure that they achieve their departmental goals. As a result they will make sure that agriculture departmental goals are developed and implemented. Agriculture is a science related subject and it is possible for the supervisors to apply science techniques in schools. A higher proportion of the supervisors who have the same subject specialization perform their supervisory roles that supervisors who do not specialize in the same subjects. The findings from the study were consistent with findings by Nkambule and Dlamini (1998) who reported that Head of agriculture in Swaziland were ineffective in supervising agriculture teachers. Their study revealed that the head of agriculture department failed to conduct lesson observations in order to evaluate the performance of teachers.

Effect of Supervision on job performance

The results indicated that the proportion of ATNAS that are not effective in teaching students (82.6%) which is the core business is higher than the ATAS. In addition, the percentage of agriculture teachers supervised by agriculture supervisors that are effective in preparing for agriculture fairs (84.6%), effective in assessing students practical work (80.8%), effective in organizing educational trips (76.9%), very effective in filling students term and annual academic reports (57.7%) and monitoring students attendance during practical (57.7%) are more than teachers supervised by non agriculture supervisors that are not effective in preparing for agriculture fairs (73.9%), assessing students practical work (73.9%) taking garden tools inventory (73.9%) and organizing educational trips. The results show that these teachers are effective in setting end of year examination (52.2%) and also effective in taking part

in purchasing stock feed (78.3%). Supervisors on the other hand are very effective in teaching students (84.6%), effective in developing teaching aids (61.5%) and managing garden tools (53.8%). In addition they are very effective in administering monthly tests (76.9%), set end of year examinations (84.6%) and not effective in organizing educational trips (53.8%). Agriculture teachers supervised by non agriculture teachers are generally not effective in performing some duties like teaching students due to biasness of supervisors who give more time and attention to their areas of specialization. Agriculture teachers supervised by agriculture supervisors are effective in all their duties. All categories are effective in lesson planning since it is one of the requirements recommended for annual increment upon assessment. Teachers are also expected to accompany students when travelling or on educational trip According to the findings, teachers supervised by non agriculture supervisors were not performing satisfactorily as teachers supervised by agriculture supervisors. Teaching Service Management (1994) stated that any person promoted to head of department must have acquired experience which should be demonstrated in both teaching and administrative skills, not taking into consideration subject specialization.

Agriculture teachers' job performance

The results of job performance among ATAS and ATNAS is presented in Table 4. This is due to the fact that Walker and Kitchel (2004) studied job satisfaction and retention of secondary school teachers and found lack of support from supervisors led to job dissatisfaction and teachers leaving the service. Supervisors are supposed to provide opportunities for teachers to feel more adequate as professionals to see greater significance, possibilities and responsibilities in their role. Supervisors focus on planning, communicating the needs of teachers to the management, giving feedback to teachers and evaluating performance of teachers through in - service training and motivate teachers for better performance in schools. The results shows that (96%) of ATAS, (69.2%) of ATNAS and (61.5%) supervisors analyzed examination results. Preparation of scheme of work is done by, ATAS (76.9%), ATNAS (69.6%) and supervisors (100%). Performance Management System is a motive behind teachers working hard because nomination for promotion is based solely on hard work. Supervisors are also urged to perform to be selected for further studies or any other promotion. Castle, (2006) stressed the need for the use of performance based assessment for promotion of teachers.

Supervisory roles

In Table 5, supervisors rated their effectiveness in their roles. The result shows that supervisors are very effective in communicating the needs of the department to the management of the school (69.2%), very effective in conducting lesson observations (84.6%). They are also very effective in analyzing examination results with teachers (84.6%) and making follow up on the resolutions made in meetings ((69.2%). This is to the supervisors' advantage because if they perform or not determines whether one is promoted to higher posts or not. The results show that supervisors are not effective in organizing induction workshop for new teachers (69.2%) and identification of teachers training needs (84.6%) which is in agreement with the findings of Dlamini (2004) from Swaziland. It is the responsibility of Teacher Training and Development to identify teachers training needs but supervisors might give a helping hand if need be.

Table 6 presents the results showing difference in the effect of supervision and job performance among ATAS, ATNAS and Supervisors. Significant differences exist in the perceived effect of supervision ($F = 27.93$, $p < 0.05$) and job performance ($F = 3.76$, $p < 0.05$). ATNAS has the highest means of 55.30 indicating that they perceived that supervisors' specialization has impact on the supervision. However, there is no difference in the mean scores of ATAS and supervisors (SupV). It then implies that in order to improve the quality of supervision, supervisors should be in the same subject specialization with the teachers they supervise. Similarly, ATNAS has the highest means for job performance (19.56) and no difference in the mean scores of ATAS and supervisors (SupV) exist. This may be due to the fact that the ATNAS in an attempt to measure up to the standard has to cover many activities and thus a high means score for job performance.

The results of the t-test analysis showing differences between ATAS and ATNAS on effect of supervision and job performance are presented in Table 7. Significant differences exist between ATAS and ATNAS for the 3 variables. Supervisors' specialization ($t = 14.97$, $p < 0.05$), effect of supervision on performance ($t = -5.98$, $p < 0.05$) and job performance ($t = -3.00$, $p < 0.05$). For Supervisors' specialization, ATAS has higher mean 47.69 which implies that supervisors should be in the same subject specialization with the teachers they are supervising. With respect to effect of supervision on performance, ATAS agreed that supervision based on subject specialization through supervisors would affect the teachers more than the general principle of supervision. Cooper (1984) stressed the need for the

development of skills for instructional supervision. In terms of job performance, ATNAS has higher mean indicating that ATNAS has to do a lot more activities to be able to measure up to required standard due to non-subject based supervision. Teaching supervisory roles is males dominate leadership positions in Botswana junior secondary schools and the supervisors comprised of married, young professionals who had bachelor's degree. Majority of ATAS and ATNAS indicated that a higher proportion of the supervisors who have the same subject specialization perform their supervisory roles that supervisors who do not specialize in the same subjects. Also, the proportion of ATNAS that are not effective in job activities is higher than the ATAS. However job performance is higher among ATNAS than ATAS and supervisors are not very effective on subject specific supervisory activities rather the general principle of supervision. Significant differences exist in the perceived effect of supervision and job performance among ATAS, ATNAS and Supervisors. Also between ATAS and ATNAS, significant differences exist between ATAS and ATNAS for supervisors' specialization, effect of supervision on performance and job performance. It then implies that in order to improve the quality of supervision, supervisors should be in the same subject specialization with the teachers they supervise as such would help would affect the teachers more than the general principle of supervision.

Corresponding Author

Oladele O. I.

Department of Agricultural Economics and Extension, North-West University, Mafikeng Campus, South Africa. E-mail: oladimeji.oladele@nwu.ac.za.

References

1. Castle S (2006) Assessing Teacher Performance, Performance based Assessment in Teacher education, Published by A division of Rowman and Littlefield, U.S.A.
2. Cooper M. J. (1984) Developing Skills for Instructional Supervision, Published by Longman Inc. 1560 Broadway New York.
3. Dlamini, B. M. (2004). Self – reported level of competence and training needs in supervisory roles by secondary school agricultural head in Botswana. *Journal of International Agricultural and Extension Education*, 11(1), 43-53.
4. Elegbeleye O. S. (2005) School Supervision and Performance Enhancement Devices at Local Education Authority level, Dept. of Psychology, Obafemi Awolowo University, Nigeria

5. Malambe, I. (2003). *Opinions of educators regarding the role of secondary inspectors in Botswana secondary schools*. Unpublished Msc Thesis. University of Swaziland, Luyengo, Swaziland.
6. Nkambule, M.E & Dlamini, B. M. (1998). Factors associated with school agriculture Supervision effectiveness in Swaziland. *UNISWA Research journal of Agriculture. Science and technology*. 2(2), 189 -193.
7. Pajak, E. & Blasé, J. J. (1989). The impact of teachers' personal lives on professional role of enhancement: a quantitative analysis. *American educational Research Journal*, 26(2), 283-310.
8. Teaching Service Management (2000) Job description for teachers, Government Printers, Botswana, Gaborone
9. Teaching Service Management, (1994). *Scheme of service for secondary school teachers*. Gaborone, Botswana: Government Printers.
10. Sallis J. (2001) *Effective School Governors, A practical guide*, Published by Pearson Education Limited, Great Britain.

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