Contribution of Classroom Climate to the Teaching of Agriculture at Senior Secondary Schools in Eswatini

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Abstract

The impact of classroom climate on students and staff can be either beneficial or a barrier to the teaching and learning process. Unfortunately, there is no study that has been conducted on the contribution of classroom climate to the teaching of high school agriculture students in Eswatini. Therefore, the study sought to find out the contribution of classroom climate to the teaching of Agriculture in Senior Secondary Schools in Eswatini. An exploratory research design was used in the study. A total of sixteen schools (n=16) were randomly selected; and one agriculture class was picked for observation on the contribution of classroom climate to the teaching of agriculture. After the observation, an interview was conducted with the classroom teacher to complement and explain some of the observations. Observation schedule and interview protocol were peer reviewed to address issues of trustworthiness. Data were collected in February 2019. Findings revealed that the four variables: Presage, Context, Process and Product variables were contributing to the classroom climate; thus, enhancing the teaching of agriculture. Therefore, the study recommended that Agriculture subject must be taught by teachers who have received training on the subject matter and have the technical skills in solving problems.

Keywords: Classroom climate, Context variable, Presage variable, Process variable and Product variable

Classroom climate is the prevailing mood, attitude, standards, and tone that students and teachers experience when in the classroom (Adelman & Taylor, 2005). Adelman and Taylor also view it as a learning environment, atmosphere, ambience, ecology, and milieu. The classroom climate is a perceived quality of the environment that results in a somewhat fluid state from the complex interaction of many immediate environmental factors (e.g., physical, material, organizational, operational, and social variables) (Fraser, 1998; Freiberg, 1999). It is an important factor in classroom behaviour and learning (Shewark, et al., 2018). There is a significant association between classroom climate and student engagement, behaviour, self-efficacy, achievement, and student social and emotional

development (Fraser, 1998). Fraser further argued that it is also related to the leadership style of school management, stages of educational reform, teacher burnout, and general quality of school life.

Classroom climate can be either positive or negative. A positive classroom climate is caring, safe, respectful, and conducive to learning while a negative classroom climate is less engaging, less emotionally supportive, less sensitive, more chaotic, and has more instances of student misbehaviour (Furlong, et al., 2003; Jennings & Greenberg, 2009; Rimm-Kaufamn, et al., 1991). Teachers can cultivate a positive environment by upholding rules for appropriate behaviour, nurturing caring relationships with all students, and facilitating positive peer interactions (Furlong, et al., 2003; Shewark, et al., 2018). Well-managed and emotionally positive classrooms promote academic and social success (Mashburn et al., 2018). Consequently, learning standards and practitioner guidelines emphasise the maintenance of a positive, well-managed classroom climate (Schonert-Reichl, et al., 2016).

Salient literature on organisational climate suggests that increasing demands for higher achievement test scores and reliance on social and tangible rewards to control behaviour contribute to a classroom climate that is reactive and over-controlling (Mahony & Hextall, 2000). A proactive approach to developing a positive classroom climate requires careful attention to enhance the quality of life in the classroom for students and staff. It assists in pursuing a curriculum that promotes a riot-free environment focusing on academic work. It also promotes social and emotional learning that enables teachers to be effective with a wide range of students, thus, fostering intrinsic motivation for classroom learning and teaching (Adelman & Taylor, 1997).

Mahony and Hextall (2000) argued that creating and maintaining a positive climate in every classroom must be a core concern of all school staff. School psychologists can play an increasing role, using every available opportunity to work with teachers in their classrooms to increase teacher competence and provide peer support. This requires going beyond traditional instructional management strategy consulting and working with individuals who have behavioural, learning and emotional challenges. School psychologists can be invited to spend increasing amounts of time in classrooms, working with teachers to improve classroom climate. In addition, school psychologists can work with other student leaders to improve classroom climate by creating and maintaining a positive school climate that promotes well-being and removes barriers to teaching and learning (Adelman & Taylor, 1997).

Tsikati and Mabuza (2022) conducted a study on the factors contributing to classroom climate that enables students to learn agriculture at senior secondary schools. The findings of the study revealed that process and product variables were the main contributing variables for a classroom climate that enhances the learning of agriculture. Unfortunately, there is no study that has been conducted to examine the contribution of classroom climate to the teaching of Agriculture in Senior Secondary Schools. Therefore, this study sought to investigate the contribution of classroom climate to the teaching of Agriculture at senior secondary schools in Eswatini.

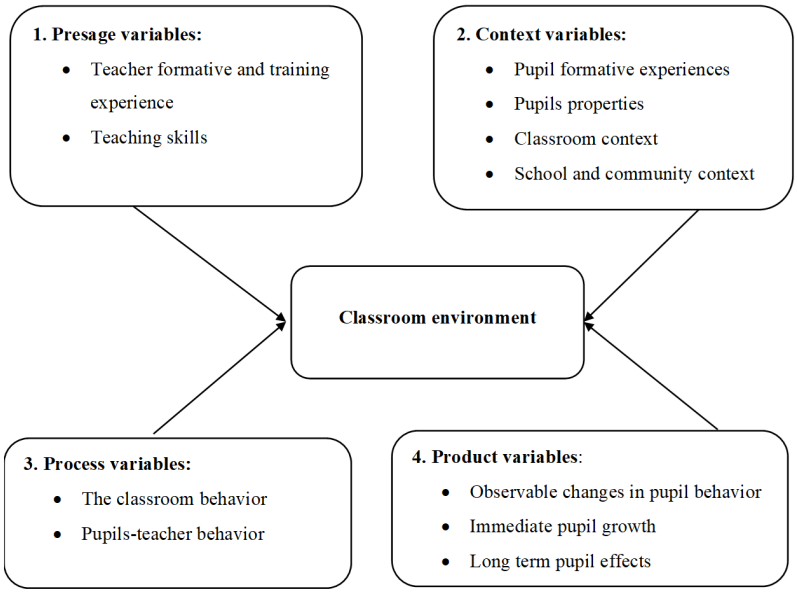
The study sought to find out the contribution of classroom climate to the teaching of Agriculture at senior secondary schools in Eswatini. The objectives of the study were to:

1. identify variables that contribute to classroom climate in modern agriculture in Eswatini.
2. describe the influence of classroom climate on student's participation during Agriculture lessons in Eswatini.
3. describe student-teacher interaction in agriculture lessons to enhance classroom climate in the lesson in Eswatini.
4. identify the methods of motivation used by agriculture teachers during agriculture lessons in Eswatini.
5. describe the teaching strategies used by teachers which contribute to classroom climate in Eswatini.

The study was under-pinned by the Theory for Teaching and Learning developed by Dunkin and Biddle (1974). The theory posits that classroom climate rests on 13 items collapsed into four variables namely: 1. Presage, 2. Context, 3. Process, and 4. Product variables for research on teaching (see Figure 1) (Bryant, 2009). The Presage variables entail the teacher's traits that influence the teaching and learning process (Dunkin & Biddle, 1974; Price, 2011). These consist of teacher formative experiences [such as teacher's religion, culture and family background], training experiences and personal attributes [such as beliefs, attitude, perceptions and background knowledge]. The context variables refer to the conditions or environment to which the teacher must adjust. This includes the influence from school, family, classroom, community and the students themselves [social class, age, sex, language, attitude, motivation, interest / goals, proficiency level, beliefs, dispositions and life experiences]. The Process variables involve the actual classroom activities; that is, teacher behaviour, learner behaviour and behaviour change (Dunkin & Biddle, 1974). The Process variables form heart of the model, as this is where the actual teaching takes place. These involve what the instructors and students do in the classroom; for example, asking questions, giving answers, explaining assignments, and correcting inappropriate behaviour. These variables focus on all instructor and student observable behaviours. Finally, Product variable is the final phase which entails the observable changes in the students as a result of their involvement in classroom activities with their teachers and other students (Bryant, 2009). This outcome depends largely on the nature of the teacher's instruction and the students' reception. The Theory for Teaching and Learning is relevant to this study as it presents the framework for unearthing the variables that influence classroom climate for teaching agriculture in Eswatini.

Figure 1.

The Theory of Teaching and Learning source Dunkin and Biddle (1974)



Methods

The study employed an exploratory research design to study the classroom climate in the teaching of Modern Agriculture in Eswatini. The study targeted agriculture teachers in 12 schools in Eswatini. Thus, three schools were randomly selected in each of the four regions: Hhohho, Lubombo, Manzini and Shiselweni. One agriculture class and corresponding teacher was randomly sampled from schools having more than one Form 5 classes. An observation schedule and interview protocol was developed guided by the objectives and the Theory of Teaching and Learning. A numerical scale, using the following ranges: 1=Very poor; 2=Poor; 3=Fair; 4=Good; 5=Very Good and 6= Excellent was used to observe the contribution of classroom climate in the teaching of Agriculture in Senior Secondary Schools in Eswatini. An interview schedule was also used to interview the agriculture teachers teaching the Form 5 students where the observations were made. The observation schedule and interview guide had the following sections: teaching and learning variable (Presage, Context, Process, and Product variables), student participation, student-teacher interaction, methods of motivation, and teaching strategies. Both the observation schedule and interview guide were peer reviewed by four members of the Department of Agricultural Education and Extension at the University of Eswatini to address issues of trustworthiness. Credibility was ensured by random sampling of the participants and triangulation in data collection using the observation and interview. Transferability was addressed by providing sufficient contextual information about classroom climate in teaching. Dependability was achieved by describing in detail the research design implementation, and data generation. Finally, confirmability was ensured by demonstrating clearly how conclusions and interpretations have been reached.

The observations and interviews were conducted at the schools by the researchers in February 2019. Letters seeking permission to conduct the study were written to the principals and the interview participants, and permission was granted. To ensure confidentiality and anonymity, the name of the schools and agriculture teachers were concealed; and the data were accessible only to the researchers. Descriptive statistics such as means and standard deviation in the Statistical Package for Social Sciences (SPSS) version 20 were used for analysing the quantitative data and narrative analysis was used for the qualitative data.

Findings and Discussion

Variables that contribute to classroom climate in Modern Agriculture

There were four variables of the Theory of Teaching and Learning that were investigated on how they contribute to the teaching of agriculture in Eswatini high schools. These were Presage, Context, Process and Product variable (see Table 1).

Presage variables

The researchers observed that classroom climate was good when considering the Presage variable (M=4.05, SD=0.86). Knowledge of subject matter (M=4.50, SD=0.80) and use of technical skill in solving problems (M=4.33, SD=0.72) were the most contributing items of the Presage variables. The teachers in the interview indicated that the depth of subject matter offered at pre-service training by the University of Eswatini was adequate; thus, they were able to handle the syllabus. One participant said that. “The courses I learnt at the University helps me in the subject matter content, I am able to explain the content in details as I learnt more than it is required by the syllabus.” The teacher also stated that agriculture is taught mostly by male teachers, thus, they were able to withstand harsh conditions

Table 1.

Variables Contributing to Classroom Climate

Variables	M	SD
Presage variables		
Teachers have knowledge on subject matter	4.50	0.80
Teacher uses technical skills in solving problems	4.33	0.72
Teacher is enthusiastic and energetic	3.33	1.07
Overall	4.05	0.86
Context variables		
Learners have enough desks and chairs	5.92	0.29
The class size	4.83	0.72
The availability of tools	4.75	0.62
Learners are interacting with teachers	4.75	0.45
Learners having relevant text books	4.58	0.10
There is enough equipment for learning	4.25	1.22
Learner's gender has influence in their learning	1.67	0.49
Learner's age has influence in their learning	1.67	0.49
Overall	4.05	0.55
Process variables		
Learners answer questions using relevant content	5.17	0.58
Teacher asks questions	5.00	0.74
Learners are involved during the lesson	4.83	0.72
Learners are able to solve problems	4.75	0.45
Teacher stimulates learners' interest during lesson	4.58	0.67
Learners ask questions during lesson	4.33	0.49
Overall	4.78	0.61
Product Variables		
Learners respond to questions in class	5.08	0.67
Students apply what they learnt in class	4.50	0.90
Overall	4.97	0.79

Note. *Cut-off point: ≤1.45 [1] - Very poor 1.45-2.44, [2]=Poor 2.45-3.44, [3]= Fair 3.45-4.44, [4]= Good 4.50-5.44[5]=Very good ≥5.45, [6]=Excellent M=Mean, SD= Standard deviation*

faced; especially while conducting practical sessions. The participants also revealed that age contributes to the positive classroom climate as the students feel motivated if they are taught by someone whose age difference from theirs is small. The teachers also claimed that they teach effectively when they are young as they are energetic and can conduct practical lessons. A teacher who is able to produce good results in external examinations exudes confidence; thus, creating a positive classroom climate necessary for the effective teaching of agriculture. One participant said that, "I usually get not less than 70% pass rate which motivates me to work hard to attain better results and I keep pushing hard to attain better results in future". The influence of the Presage variables reiterates the findings by Bryant (2009) that teacher formative experience and teacher training influence teacher's classroom practices. Similarly, Tsikati and Mabuza (2022) reported that presage variables such as subject matter possessed by the teacher contributes to classroom climate that enhances the learning of agriculture.

Context variables

The observation made by the researchers revealed that the Context variables contributed positively to the classroom climate for teaching agriculture (M=4.05, SD=0.55). The major contributing items of the Context variable were: learners having enough desks and chairs (M=5.92, SD=0.29), small class size (M=4.83, SD=0.72), availability of tools (M=4.75, SD=0.62), learners interacting with teachers (M=4.75, SD=0.45), learners having relevant text books (M=4.58, SD=0.10), and learners having enough equipment (M=4.25, SD=1.22).

The teachers interviewed cited the availability and adequacy of equipment (such as chairs and desks) and teaching aids (such as charts or audio visuals) as major factors enhancing the teaching of agriculture. Similarly, the provision of sufficient garden tools contributes to the classroom climate. The teachers claimed that students are able to tap into the psychomotor skills which are so important in learning a practical subject like agriculture. One participant said that: "When there is enough equipment, teaching and learning becomes simple as I can be able to easily explain the content to the students.

Class size was also identified as a contributing factor to classroom climate. The participants indicated that they teach effectively in small classes, as they are able to provide individual feedback timeously. The participants also felt that pupils who had studied agriculture at primary school and junior secondary school were comfortable, and this enhances the classroom climate at senior secondary. These students tend to excel in the subject and make the teaching and learning process simple and effective because the pupils are able to relate to the previous learning. One participant said that:

> Students who did agriculture at the primary and secondary level tends to understand better than those who did not do agriculture at all; those who did agriculture easily relate to what they learnt before and they excel in agriculture, thus teaching and learning becomes more effective.

Tsikati and Mabuza (2022) found that even though Context variables were generally not contributing to the learning of agriculture, availing resources such teachers, furniture, agriculture tools and textbooks were vital.

Process variables

The observation revealed that the classroom climate was very good regarding the Process variable (M=4.78, SD=0.61). The major contributing items of the Process variable to classroom climate were: learners answering questions using relevant content (M=5.17, SD=0.58), teachers asking questions during the lesson (M=5.00, SD=0.74), teachers involving students during the lesson (M=4.83, SD=0.72), teachers stimulating students' interest during the lesson (M=4.58, SD=0.67) and learners asking questions (M=4.33, SD=0.49) in class during the teaching of agriculture.

The interviews revealed that strategies such as demonstration and discussion stimulate students' interest during an agriculture lesson and positively contribute to the classroom climate. The participants said that another strategy is that they explored relevant interest approach. They also asked relevant questions during the lesson to involve students in order to enhance classroom climate. The participants further stated that relevant questioning enabled them to evaluate themselves and improve in their teaching. The participants also indicated that the students also ask questions during the lesson to clarify their understanding. One participant said that:

> I usually ask questions during the lesson and after the lesson: this ensures that students are involved during the lesson and also help me identify what the students understands from the lesson. I also evaluate myself for better teaching in future.

The most predominant activities during lessons were group and individual tasks such as classwork, presentations and unannounced quizzes. The findings of the study are consistent with those from Fung and Chow (2008) who concluded that the teaching process is influenced by the observable activities that take place between teachers and students in class. These involve the teachers' teaching strategies, student responses and many others. Fung and Chow also revealed that teachers are responsible for students' interest and gearing the mood and flow of the class.

Product variable

The classroom climate was very good regarding the Product variable (M=4.79, SD=0.79). The major contributing items of the Product variable to classroom climate were learners responding to questions in class - applying what they learnt during the lesson (M=5.08, SD= 0.67) and students' ability to apply what they learnt in class during classwork (M=4.50, SD=0.90).

The interviews revealed that pupils applied the knowledge they acquired in lessons during evaluation exercises and practical sessions. The participants stated that they continuously evaluated their lessons using

content taught in class. The agriculture teachers also noted that students were able to apply knowledge from the theory session during the practical sessions as well as the research project. One participant said that: "Another way in which students apply what they learnt is during the practical session as they apply what they learnt in theory during the lesson". The content taught in agriculture lessons was cited as one of the major factors influencing career choice. The participants felt that positive classroom climate contributed to change of attitude towards agriculture and a sizeable number of students end up choosing a career in agriculture or venturing in agri-business. One participant said that:

> Students tends to make sound decisions because of what they learn in agriculture. I have a number of students who have started their own businesses because of what they learnt in agriculture. Also, students from previous groups; I noticed that they choose agriculture as their career path.

The findings of the study are consistent with those from Tsikati and Mabuza (2022) who reported that Product variables such as agriculture knowledge transfer from school to home/farm, change of attitude towards agriculture, and considering agriculture as a career contributed to classroom climate to enhance the learning of agriculture.

Influence of classroom climate on students' participation during agriculture lesson

Table 2 indicates that the researchers observed that classroom climate has an influence on student's participation during agriculture lessons (M=4.49, SD=0.33). Students' participation was evident as they were responding to questions asked by the teacher during a lesson (M=4.92, SD=0.79), students were asking questions (M=4.83, SD=0.58), and teachers were responding to students' questions during the lesson (M=4.58, SD=1.31). Furthermore, students' participation was ensured by giving individual students tasks during the lesson (M=4.17, SD=1.19) and students were consulting with colleagues during the lesson (M=3.83, SD=0.94).

The interviews revealed that the teachers encouraged students' participation by asking them questions during the lesson, and also encouraging the students to ask questions. This provided the opportunity for effective interaction between the teacher and the students; thus, improving the teaching and learning of agriculture. The students are given tasks to perform individually or as a group to encourage full participation during lessons. One participant said that: "I ensure that I give students some work which they will present individually and sometimes I give them a group presentation whereby they are given a piece of work to present on in class". The students' participation is evident when the students are responding to questions posed by the teacher or they ask questions. According to Tsikati and Mabuza (2022), classroom climate influenced student participation during the learning of agriculture. Student participation is encouraged in student-centred approach which engages the students in the learning process. This is critical in the development of skills which result in healthy behaviours (Nonkukhetkhong, Baldautf & Moni, 2009; Schuh, 2004; White, 2007).

Student-Teacher Interaction

The observations revealed that student-teacher interaction during agriculture lessons enhanced classroom climate (M=4.99, SD=0.38) (Table 3). The major prominent items on student-teacher interactions during agriculture lessons were: teacher showing respect to students (M=5.33, SD=0.65), teacher outlining the importance of the lesson (M=5.08, 0.90), teachers providing activities and directions (M=5.08, SD=0.67), and teacher asking questions (M=5.00, SD=0.60). Other student-teacher interactions during agriculture lessons enhancing classroom climate include teacher providing feedback to students (M=4.92, SD=0.51), teachers responding to students' questions (M=4.83, SD=0.72), and students asking questions during lessons (M=4.67, SD=0.49).

The interviews revealed that student-teacher interaction is ensured by allowing students to ask questions to improve the teaching and learning of agriculture. This helps the students to master the content. The agriculture teachers improve interaction by being approachable and friendly. One participant said that "I make sure that I am

Table 2.

Students' participation during agriculture lesson

Statements	M	SD
Students respond to questions during the lesson	4.92	0.79
Students ask questions during the lesson	4.83	0.58
Students are given time to think before responding to questions	4.58	0.51
Teachers respond to students' questions	4.58	1.31
Students are given responsibilities	4.17	1.19
Students consult with colleagues during the lesson	3.83	0.94
Overall	4.49	0.33

Note. *Cut-off point: ≤1.45 [1] - Very poor 1.45-2.44, [2]=Poor 2.45-3.44, [3]= Fair, 3.45-4.44, [4]= Good, 4.50 -5.44, [5]=Very good, ≥5.45, [6]=Excellent M=Mean, SD= Standard deviation*

Table 3.

Student-Teacher Interaction

Statements	M	SD
Teacher shows respect to students	5.33	0.65
Teacher outlines the importance of the lesson	5.08	0.90
Teacher provides activities and directions	5.08	0.67
Teacher asks questions during the lesson	5.00	0.60
Teacher provides feedback to students	4.92	0.51
Teachers respond to students' questions	4.83	0.72
Students ask questions during lesson	4.67	0.49
Overall	4.49	0.38

Note. *Cut off point: ≤1.45 [1] - Very poor, 1.45-2.44, [2]=Poor, 2.45-3.44, [3]= Fair, 3.45-4.44 [4]= Good, 4.50 -5.44, [5]=Very good, ≥5.45, [6]=Excellent M=Mean, SD= Standard deviation*

always approachable to students so that students can easily share whatever they want". Existing literature indicates that students who were reported having positive relationships with their teachers, are more motivated and engaged in classroom activities than students having negative relationships (Vedder, et al., 2009). Instructors can facilitate a supportive classroom climate by implementing basic strategies which include: showing acceptance, respect, and caring for students; establishing a business-like, but non-threatening atmosphere; communicating appropriate messages about the relevance of the subject matter; allowing students to experience some control in the classroom and learning environment; and creating a sense of community (Ormrod, 2003).

Methods of motivation used by agriculture teachers during agriculture lessons

The observation revealed that methods of motivation used by agriculture teachers during the lesson contribute to classroom climate (M=4.10, SD=0.42) (see Table 4). The most prominent methods of motivation used by agriculture teachers were teachers knowing students' names (M=5.58, SD=1.16), providing feedback for improvement (M=4.92, SD=0.79), making examples in class (M=4.67, SD=0.49), and creating threat-free environment (M=4.50, SD=0.52). Other methods of motivation used by agriculture teachers were praising students (M=4.42, SD=0.79), tolerating mistakes (M=4.42, SD=1.24), being enthusiastic (M=4.25, SD=0.97), giving students individual tasks (M=4.17, SD=0.83), and cracking jokes in class (M=4.00, SD=0.85).

The interviews revealed that the agriculture teachers motivate students by giving incentives (such as a piece of cake, some sweets and stationery) and praising them for providing correct responses (such as "that's good", "that's excellent" and "good try"). One participant stated that: "For students who did very well, I give money or a piece of cake, these motivates the other students to push very hard to obtain the reward next time". Another participant said that: "When a student responds correctly, I praise him saying good, very good, excellent so that the student is motivated to respond and participate in class. When a student responds with a wrong answer, I say good try so that the student cannot be discouraged".

According to Hussin, Maarof and Dcuiz (2001), motivation in learning plays a vital role. It also develops successful learners, who continuously engage themselves in learning even after achieving the goal. Similarly, Vedder et al. (2009), Connell and Klem (2004), and Fraser and Goh (2000) concluded that students who were reported to have positive relationships with their teachers were more motivated and engaged in classroom activities than students having negative relationships.

Teaching strategies used by teachers that contribute to classroom climate

Findings from the observation indicate that generally, the strategies of teaching used by agriculture teachers during a lesson do not contribute to classroom climate (M=2.17, SD=1.49) (Table 5). However, the interview revealed that the agriculture teachers used strategies such as multisensory strategy, visualisation strategy, and cooperative learning to enhance classroom climate in teaching agriculture. One participant said that: "I usually use multisensory strategy in my class where I demonstrate something and let the students do what I was demonstrating. This makes the students understand the concept very well". Teaching strategies are multidimensional, and their effectiveness depends on the context in which they are applied. There is no single strategy that can guarantee better student outcomes as literature reveals a number of practices that enable learning among students (Hattie, 2009; Marzano, 2001; Wayne & Young, 2003).

Table 4.

Methods of Motivation

Statements	M	SD
Teacher knows students' names	5.58	1.16
Teacher provides feedback for improvement	4.92	0.79
Teacher makes examples in class	4.67	0.49
Teacher creates threat-free environment	4.50	0.52
Teacher praises students	4.42	0.79
Teacher welcomes mistakes from students	4.42	1.24
Teacher is enthusiastic	4.25	0.97
Teacher gives students responsibilities	4.17	0.83
Teacher cracks jokes	4.00	0.85
Teacher gives group work	2.08	1.16
Teacher gives reasons for assignment	2.08	1.08
Overall	4.10	0.42

Note. *Cut off point: ≤1.45 [1] - Very poor, 1.45-2.44, [2]=Poor, 2.45-3.44, [3]= Fair, 3.45-4.44 [4]= Good, 4.50 -5.44, [5]=Very good, ≥5.45, [6]=Excellent M=Mean, SD= Standard deviation*

Table 5.

Teaching strategies used by teachers that contribute to classroom climate

Statements	M	SD
Wait time strategy	4.83	0.39
Multisensory use in learning	4.00	1.28
Visualization	2.25	1.96
Cooperative learning	1.83	1.53
Behaviour management	1.42	1.00
Inquiry-based instruction	1.08	0.89
Differentiation	1.08	0.89
Technology use in the classroom	1.00	0.03
Overall	2.17	1.49
Teacher gives group work	2.08	1.16
Teacher gives reasons for assignment	2.08	1.08
Overall	4.10	0.42

Note. *Cut off point: ≤1.45 [1] - Very poor, 1.45-2.44, [2]=Poor, 2.45-3.44, [3]= Fair, 3.45-4.44 [4]= Good, 4.50 -5.44, [5]=Very good, ≥5.45, [6]=Excellent M=Mean, SD= Standard deviation*

Summary

Classroom climate in the teaching of agriculture was mainly influenced by Process and Product variables. Another conclusion drawn was that Presage variables contributing to classroom climate for the teaching of agriculture included teachers' knowledge of subject matter, the use of technical skill in solving problems, sex, age, and academic reputation. In terms of the Context variable, it was also concluded that learners having enough desks and chairs, availability of adequate equipment and teaching aids, small class sizes, availability of tools, learners interacting with teachers, learners having relevant text books, and having studied agriculture at the lower levels were contributing to the teaching of Agriculture at Senior Secondary. Regarding the Process variables, classroom climate was influenced by the ability of the agriculture teachers to involve students through questioning and learners providing answers using the content of the lesson, learners asking questions, teachers stimulating students' interest mainly through the interest approach, and giving class activities using approaches such as individual or group work. The Product variables contributed to classroom climate in terms of learners responding to questions in class, students' ability to apply what they learnt in class, students choosing agriculture as career or business venture, and change of attitude about the agriculture. The study found that students' participation by asking and answering questions, performing individual or group tasks contributed to classroom climate. Also, student-teacher interactions such as teachers providing activities and directions, providing feedback, responding to students' questions during agriculture lessons enhanced classroom climate. Methods of motivation used by the agriculture teachers during agriculture lessons such as praising the students, giving incentives and rewards contributed to positive classroom climate that enhanced the teaching of agriculture. Finally, the study found that the teaching strategies used by the agriculture teachers were not effective in creating a positive classroom climate to enhance teaching.

The study recommended that agriculture must be taught by teachers who are trained and have the technical skills. Agriculture teachers must strive for excellence in the preparation of students for external examinations in particular; while organising themselves well for internal examinations; because such influence classroom climate. Provisions must be made to assist female and old teachers as they were reported to be doing poorer than their male and younger counter parts. The school administration should provide appropriate teaching and learning resources (such as furniture, equipment, teaching aids and learning materials) and observe the legal teacher-pupil ratio. Agriculture teachers must strive to maintain a healthy relationship with their students because this has the potential to influence classroom climate. Teachers must be creative and thoughtfully craft interest approach in their lessons; as this remains key in influencing classroom climate.

Teacher-student relationship has the potential to influence career choice among students; therefore, agriculture teachers must be very careful, and maintain a healthy relationship to encourage students to choose a career in agriculture or agri-business. In order for learners to remain focused and do well academically, agriculture teachers must vary the methods of motivating students, such as giving rewards and incentives. The Ministry of Education and Training should equip the agriculture teachers with teaching strategies that create a positive classroom climate necessary for teaching agriculture.

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