Overcoming Teacher-Related Challenges to Performance in Biology Subject among Secondary School Students in Eldoret Municipality, Kenya

1Wabuke Joy Mukhwana, 2Barmao Catherine Chelagat and 3Jepkorir Magdaline

1Chepkoilel University College, Department of Science Education; P. O. Box 1125-30100, Eldoret, Kenya.
2Moi University, School of Education, Dept of Management and Policy Studies P.O Box 3900-30100, Eldoret, Kenya.
3Moi University, School of Education, Dept of CIE, Box 3900-30100, Eldoret, Kenya.

Corresponding Author: Wabuke Joy Mukhwana

Abstract
This paper identifies and discusses the teacher-related factors and how they influence performance in Biology, as a science subject, based on a research done in Eldoret Municipality. The study was conducted through an ex post facto design. A total of ten secondary schools (out of 30) were selected to make up the sample. Target respondents were form three students and teachers of Biology (those teaching form three) within the municipality of Eldoret. The study sample of 225 respondents, 200 students and 25 teachers, was obtained by using stratified sampling technique, because of the differences in characteristics. Simple random sampling was then used to choose the streams and particular students who participated in the study. Purposive sampling was used to obtain only the students who study Biology. The study employed questionnaires, observations and interviews to collect data. The data was analysed using the Statistical Package for Social Science (SPSS) computer program. The results were presented using descriptive and inferential statistics and analyzed using both qualitative and quantitative techniques. The respondents viewed the use of appropriate teaching methods and materials, manageable student numbers in class, teachers’ ability to communicate well and teachers giving regular assessment as factors leading to good performance in Biology. On the other hand, the study revealed that large student numbers in a class, teaching staff shortage and teachers’ ill health lower students’ performance in Biology. The study is significant as it provides insights into the factors that influence performance of students in Biology in the Kenya Certificate of Secondary Education (KCSE).

Keywords: overcoming teacher-related challenges, performance, biology subject, secondary school students, Eldoret municipality, Kenya.

INTRODUCTION
Academic achievement is usually established through examinations, which consist of set questions that seek to determine how much an individual perceives the subject as a result of learning. Commendable performance is an indication of effective learning. Secondary education in Kenya has been characterized by poor performance in national examinations, especially in core subjects such as Mathematics and Sciences (MoEST, 2005). There has been an outcry nation-wide that performance in Sciences (Biology included) is poor and the trend has been observed for some years. According to Professor Karega Mutahi, the Permanent Secretary Ministry of Education (MoE), the KCSE results portray poor performance in Sciences (Jebet & Naserian, 2003). The most recent outcry has been expressed through press statements by the Minister for Education after the 2008 KCSE results were released. The Minister lamented over the poor performance in Biology among other Sciences (Aduda, 2009). Releasing the 2009 KCSE results, Prof. Ongeri, the Minister for Education further noted there was a performance drop in Biology: considering it is a crucial subject. This is not news to reckon, given that the subject had recorded a drop in performance in 2008 KCSE (Siringi, 2010). There is need for scientific and technological advancement for any nation to keep in step with the world technological growth. This will enable nations to advance and compete effectively in economic and social growth and development. Nevertheless, it is difficult to envision a developing nation being unable to achieve technological advancement with its large manpower base being ignorant or unable to handle the same technology, owing to inherent phobia to Sciences. It calls for concerted efforts to reverse this trend, if the projected growth is to be achieved.
It is therefore necessary to direct more efforts on Science education. Commitment in strengthening the teaching of Science by enhancing skills and delivery capabilities is required. These efforts should include ensuring that a teacher is well placed to deliver the concepts and content in a way that is understandable to the learners. In view of students’ poor performance in KCSE Biology, therefore, there is need to establish the factors that influence performance in Biology in KCSE. The aim of this paper is to identify the teacher-related factors that influence the performance of students in Biology in KCSE examination in selected secondary schools in Eldoret Municipality, and discuss them with a view to recommending ways in which teachers can be better enabled to do their work more effectively.

Teacher-related factors are conditions at the teachers’ dispensation that have an influence on the teaching-learning process hence performance of students. These include teacher characteristics and their choice of teaching methodology, as well as how teachers utilize the available resources.

Teacher Characteristics and Teaching Methodology

Ogunniyi (1996, p. 278) notes that no education system is higher than the level of the teacher. Thus, standards in Science classrooms may fall because of the shortage of properly trained Science teachers. Deficiencies in practical skills and conceptual understanding are passed on from the teacher to the learner who later becomes a teacher – from one generation to the next. This cycle perpetuates incompetence and can lead to a deterioration of standards over time. Poor teacher education could account for the teacher’s verbatim reliance upon textbook notes and practical instructions (Muwanga-Zake, 1998), and the practice of chalkboard teaching and teachers’ inability to use equipment that is not familiar (e.g. “New” equipment not drawn in their text books) meaning that teachers have to be work-shopped on how to use every ‘new’ Science equipment.

Muwanga-Zake (ibid.) argues that poor Science teaching may be a result of lack of qualified and adequate Science teachers. The turnover in the subjects is so high that in four years, a student is likely to be taught by four teachers. In addition, many graduate teachers are not well grounded in pedagogy – teaching skills – and this affects the way they impart scientific knowledge to their students. Common complaints by students are that the subject is boring, abstract and does not relate to the real world. This is because university Science curricula are geared towards producing highflying intellectuals for the world of Science and technology but not teachers. So there is little or no effort to make university teaching meet the needs of potential high school teachers. This problem, the universities have failed to resolve, despite it being raised by educationists time and again. This contrasts with the programmes that the then Kenya Science Teachers College offered, where students went through the high school curricula in Science before they graduated. The College (Kenya Science) emphasized pedagogy rather than content, unlike the universities (The Blackboard, 2000).

The performance in Sciences is also affected by a negative attitude engineered by some teachers. Quality assurance and standard officers (QASO) argue it is common for Science teachers to dismiss some of their average and weak students as non-starters in the subjects. Some teachers mystify the subjects instead of popularizing them. Girls are the major victims of such negative attitudes that portray Sciences as a male domain (ibid., 2000). Studies done by Muwanga-Zake (1998) indicate that teachers’ misconceptions of the problems of Science education contribute to the poor performance of students in Science subjects. Teachers claim lack of Science equipment and laboratories prevent them from teaching Science practically. Muwanga-Zake (ibid.) outlines that teachers who have the facilities do not use them. The main reason teachers do not use practical approaches is that they are deficient in practical skills and do not understand the Science concepts they are supposed to teach.

Some ‘qualified’ teachers in South Africa have claimed that they were never taught much of the prescribed Science practicals when they were learners at school or as teacher trainees at college or university (Muwanga-Zake, 1998). One reason contributing to this claim could be that practicals do not contribute directly towards passing examinations. Participants at a Science conference in Nairobi (March 2001) have argued that, teaching methodologies were blamed for being teacher-centred at the expense of students’ participation, therefore, contributing to their poor performance. Poor performance in Science was linked to weaknesses in teaching occasioned by inadequate preparation, methodology and understaffing (Siringi, 2001). The participants said teachers were overburdened, giving them little time to prepare lessons. Participants further cited lack of regular in-service courses as one of the causes of poor performance in the subjects. They said in-service would teach them new teaching methods and reinforce old ones.

Ogunniyi (1996) suggests that Science teachers suffer from low morale because of the overburdened curriculum and low salaries compared to scientists in business industry. Teaching Science at school requires more input than other subjects because the teacher has to prepare for practical work and to care for the equipment and the laboratory (ibid.). Yet
Science teachers have the same number (or more) of lessons as teachers of art subjects. This paper, therefore, specifically seeks to establish if teaching style and teachers' workload affects performance in Biology. Muruguru (2000) indicates that teacher qualification and teaching experience influence students' academic achievement in Kiswahili. In recognition of the importance of teacher training, the World Bank has commissioned a research on the relationship between the quality and training of teachers and students' achievement. Considering the findings related to Kiswahili, this paper looks into the impact of teacher qualification and experience on students' performance in Biology.

Teacher distribution is another factor, which can have a bearing on students’ performance. Muruguru (2000, p. 23) has found out that there is unequal distribution of teachers between the main urban centres and rural districts. The urban centres of Nairobi, Mombasa, Kisumu and Nakuru in particular have a high proportion of professionally trained teachers while the reverse holds for the rural districts. This could probably explain why students in urban schools perform better than those in rural schools in national examinations. Eshiwani (1986) notes that the success or failure of any educational programme depends on the competence of teachers. Muruguru (ibid.) further notes that in-service courses can provide teachers with an opportunity to update their knowledge concerning areas of specialization. On the other hand, studies reviewed by Jepkoech (2002), indicate that teacher characteristics place an emphasis on factors such as role models, attitudes towards teaching and teacher quality that is academic qualifications, professional experience and competence and teacher preparedness. Jepkoech (ibid.) quotes a Chinese proverb by the educationist, Confucius, in support of the value of student-centred learning:

When I hear and I forget,
When I see and I remember and
When I do and I understand

The KNEC (1992) report asserts that teachers should combine both the discovery method and didactic exposition when teaching; “sometimes using one, sometimes the other, taking the best of both” (p 28). The author of this paper, therefore, sought to establish whether teacher characteristics such as teacher qualification, teaching experience, workload, teachers’ health and teaching style in part influence student performance in Biology among the selected sample in Eldoret municipality.

LIMITATIONS OF THE STUDY

The study was confined to the factors relating to students, teachers and institutions. As such, any other factor that influences performance of students which was not part of the defined parameters of the study was deemed out of scope. The results were, therefore, interpreted only within this context of the study. The study was also limited to a smaller sample of schools that were selected and Form Three students participated. The study was further limited to the performance in Biology in KCSE and to analyzing data given by the sources. The study had no control over the exact information students and teachers of Biology chose to give or withheld. Despite these limitations, the study provides a framework for undertaking a close analysis of the relationship between teacher-related factors and academic performance in schools and recommending appropriate interventions.

MATERIALS AND METHODS

The study was carried out in 10 selected secondary schools in Eldoret municipality of Uasin-Gishu County in the Rift valley Province of Kenya. Eldoret municipality comprises of Eldoret East, Eldoret West and Waren Districts. It sought to capture useful data that was representative of the factors that influence performance of students in Biology in the three districts (currently Uasin-Gishu County). The study design was ex-post-facto. This is a design in which the study variables are not exposed to direct manipulation or intervention on part of the research. However, the author provided as much control as possible under the existing conditions. The research control was limited to the responses to specific category of form three students in the selected schools.

There were 30 secondary schools within the municipality at the time of study, of which 10 were selected for the study based on whether they were boys’, girls’, or mixed schools. Biology teachers in the selected schools at the time of study were involved. Two hundred students and twenty-five teachers were used in the study. Owing to the varied nature of the schools, stratified sampling was used. Three categories were used for equal representation i.e. girls’, boys’ and mixed schools. During sampling, 75% of the girls’ and 100% boys’ schools were used while 20% of the mixed schools were used. Simple random sampling was used to select the schools in the girls’ and mixed category. Data was then collected from the sample selected using observations, questionnaires and interviews. Both qualitative and quantitative data analyses were employed. Qualitative analysis involved derivation of explanations and making interpretations of findings and trying to establish relationships from information gathered. Quantitative analysis involved derivation of statistical descriptions and interpretation of data by use of descriptive statistics.

RESULTS AND DISCUSSION

Teacher-related factors were measured by the
following variables: level of education (qualification), level of experience, health status, number of classes a teacher is allocated, material used by a teacher, teaching style, exposure to exams from other schools, coverage of syllabus, having too many students in class, inability to communicate well with students due to language barrier and finally, ability to give assessment on a regular basis.

**Teachers’ Level of Education**

Teachers are an important resource in the teaching/learning process and their training requires critical consideration. The education programmes aim at developing professionalism, attitudes, values and communication skills that equip a teacher with knowledge and ability to identify and develop the educational needs of a child (MoEST, 2005). A teacher’s level of education (qualification) is a very important determinant in effective teaching and learning. Teacher training relates to the capability of a teacher to teach effectively influencing performance. Fifty-six percent of teacher respondents agreed that teacher level of education influences performance in Biology.

This is because trained teachers have the know-how in the subject to teach it effectively as they are equipped with the skills and knowledge to teach with confidence. Forty percent (40) of teacher respondents disagreed that teacher level of education influences Biology performance because to them, teacher training is not a determinant factor but it is their ability to understand and deliver the content (regardless of them being trained or not) that greatly matters. According to MOEST reports (2005), secondary school teacher training combines teaching methodology and subject mastery, causing both the academic and methodology to suffer from an overburdened program. This may result in production of inefficient teachers.

**Teachers’ Level of Experience**

Experience equips an individual with the necessary knowledge on how to tackle challenges in a particular field. For instance, high level of experience may equip the teacher with the necessary skills to change student’s attitude to make them like the subject hence perform well. In view of this, the study sought to establish whether respondents believed experience of the teacher influences the performance. The findings showed that majority of the students (84%) and teachers (72%) agreed that teacher’s level of experience influence performance in Biology. Respondents were of the idea that highly experienced teachers have a wide range of knowledge from which they could use to enhance performance.

Most of the interviewed students were alluding to the saying “experience is the best teacher.” Their argument here was that experience makes a teacher “better” for through experience they understand how better to handle different students in the subject to realize good results. In an interview with one of the students, she asserted “I prefer a teacher who has taught and made students pass to a fresh one from college.” An element of confidence in a teacher on the level of experience was therefore revealed by this assertion. Students were also of the view that teachers with high level of experience were in better position to initiate the right attitude and encouragement to the students.

Teachers polish their skills over a period of time so as to perform tasks effectively as relates to mastery of content, teaching methodology and management of students. Observations made from the secondary data indicated that teachers who have taught for a longer period posted better mean scores than those with less years, an indication experience has an impact on performance. Most respondents were of the opinion that experienced teachers were better placed to handle issues relating to teaching and learning process hence influencing performance. However, 21 of the student and 5 of the teacher respondents did not agree with the statement that teachers’ level of experience affects performance because of importance is the teacher’s ability to pass the knowledge to the learners. This can even be achieved by the teachers organizing themselves relating to the topic/concept at hand.

**Teachers’ Health Status**

Health of a teacher is important in determining the punctuality of the teacher in attending lessons and syllabus coverage. Teachers’ health also greatly influences the morale of the students which may affect the attitude of the student towards lessons. The research sought to know from both the students and teachers whether teacher’s health influences performance. The study established that 95 of the students and 16 of the teachers thought teachers’ health influences performance.

Students argued that most teachers with poor health lose patience with their students’ thus cultivating negative attitude in the students towards them and eventually toward the subject. According to the respondents, poor health status of a teacher leads to poor coverage of syllabus and concrete revision of the subject because most of the time the teacher will be out for treatment while at the same time paralyzing class work which in the end affects performance. HIV/AIDS scourge is still a major problem to teachers and the entire nation (Wesonga, 2008). There are teachers ailing from HIV/AIDS and are too weak to work. This denies learners an opportunity to be taught and equally denying the education sector vital skilled human resources. HIV/AIDS threatens to increase the number of poorly educated children.
On the other hand, a healthy teacher feels motivated to teach and at the same time, impacting positive attitude in learners which influences performance. However, 78 of student and 6 of the teacher respondents did not link teacher’s health to performance. They argued that when a teacher suffers ill health it is the duty of the head teacher to seek for a substitute so as to enable the learning process to continue uninterrupted. The author notes that more needs to be done on issues relating to HIV/AIDS pandemic so as to salvage the ill teachers who otherwise are a vital human resource in the education sector.

**Number of Lessons a Teacher is allocated**

The recent introduction of free day secondary education (FDSE) programme has been led to the increased enrolment in secondary schools. This implies that teacher student-ratio is low hence teachers cannot effectively control classes especially Sciences (SMASSE, 2008). The teacher is one of the most important inputs into the education system and, therefore, efficient management and utilization of teachers is crucial to the quality of learning outcomes (MOEST, 2005). For this reason, the study sought to establish the extent to which the number of lessons a teacher is allocated influences performance. Results showed that 125 of the students and majority (21) of the teachers agreed that the number of lessons a teacher is allocated influence the performance. Too much work for the teacher affects their performance on content delivery and encourages them not to assess their students regularly.

Assessments indicate the progress of learners and help learners develop skills on how to answer questions and takes away examination phobia which is common among students. “We are assessed once a month and we hardly revise those examinations. Sometimes the teacher only comes to give assignments and leaves without marking,” asserted one student interviewed. The implication is that too much workload on the teachers incapacitates them to monitor a student’s progress. Most teachers turn out to be careless in their work neglecting the specific need of a student, thus influencing the performance of the subject. The teacher respondents asserted that number of lessons a teacher is allocated influences the teachers work load. The Teacher Service Commission’s (TSC) directive to head teachers that the minimum numbers of lessons a teacher should teach is 27 per week, had a direct impact on teachers’ workload.

A large work load causes teachers to be less efficient in planning and evaluating learners thus affecting performance. Twenty-eight percent (56) of the student and 16% (4) of the teacher respondents disagreed that the number of classes a teacher is allocated influences performance. According to them, what matters is how well one is able to master the content and teaching methodology regardless of the number of lessons one has to teach. In fact, they viewed it as an advantage because handling the same concept in more than one class perfects the mastery and delivery of the content. The author of this paper observes that a shortage of teachers is a contributing element to the mediocre performance in Biology.

**Materials Used by the Teacher**

The material used by a teacher equally determines the content delivered to the students. Owing to this, the research sought to know whether respondents thought the material used by a teacher influences performance. The study established that majority (152) of the students and (21) teachers agreed that the materials used by a teacher influences performance. Visual teaching aids such as flip charts promote learning; almost all students recall having seen pictures more often than having read words or sentences (Glewwe, 2000).

The materials a teacher uses determine the content the teacher delivers to the students, poor quality materials for instance neglects the changes that may have been introduced in the syllabus thus disadvantaging the students in those areas. In an interview with one of the students who rated her performance in Biology as poor, she said “our teacher uses the old edition of Biology text book, which has complex terms and examples that I find it hard to understand.” This suggests that the some of the students have negative attitude towards some of the learning materials used in Biology lessons. This implies that the materials a teacher uses not only influences the students’ attitude towards Biology, but may also affect their preparation for examination purposes. This may partly determine ones performance in any given subject. High cost of teaching materials may contribute to the decline in performance, for this reason the teacher is left to instruct in a generalized manner (MOEST, 2005).

**Teachers’ Teaching Methods**

Teaching methods encompass discovery and didactic methods (KNEC, 1992). Teachers should combine both, sometimes using one sometimes the other taking the best of both (ibid.). Teachers use varied methodologies such as lecture, discussions and team teaching, their influence on output is diverse. Thus the study sought to establish the extent to which teachers’ teaching method influences performance. It was established that majority (166) of the student and (21) teacher respondents agreed that teachers teaching style influence performance. A teacher’s teaching method may in a way determine the attitudes students will show towards a certain subject. If the teaching style is complex, students will find it hard to understand thus, develop a negative attitude towards the subject.
Curriculum implementation greatly depends on the teacher who should be the implementer. If the contents are not delivered effectively to the students, there will be poor understanding which will greatly hinder achievement. Good teaching method by a Biology teacher on the other hand, motivates students to work hard since it enhances positive attitudes and interest development among students which influences performance.

**Teachers’ Exposure to Exams from Other Schools**

Teachers’ exposure to various exams may influence performance. In order to validate this, the research inquired from the respondents if this really was the case. Majority (150) of the student and 17 of teacher respondents agreed that, teachers’ exposure to exams of other schools, influences performance. When respondents were asked to justify their argument, they said that such examinations enhance a teacher to be well versed with different approaches used by examiners hence, reinforcing his/her teaching style which later influences performance.

Through these examinations, also, a teacher can predict the most common questions and the areas students perform poorly in Biology thus concentrate in this area. When interviewed to know if a teacher’s exposure to exam was important, one student said “teacher lazima awe anajua vile exams zinakaa ndio ajue exactly cha kuteach.” This means, a teacher must know how exams are set so that they may know specific teaching areas. This statement suggests that students were of the opinion that unless a teacher was exposed to various exams, such a teacher will not know what exactly to teach in the subject. From this, the student implied that a teacher’s exposure to exams was important in boosting student’s confidence and eventually in the subject.

When students are exposed to exams from other schools (especially schools that have a record of posting good results in the national exams) they develop a positive attitude if they are able to answer these questions correctly. They also help in standardizing exams set by their teachers which give the students a level playing field with their colleagues in the best performing schools.

**Teachers’ Coverage of Syllabus**

In Kenya, the MoE provides the syllabus to teachers as a guide to content delivery. Generally, coverage of the syllabus may influence performance (KNEC, 2006). The study therefore sought to find out if teachers’ coverage of syllabus influenced performance in Biology. Majority (174) of the students and (22) teachers agreed that syllabus coverage indeed affects performance in Biology. The respondents noted that completion of the syllabus creates confidence in learners which is required to handle exams. Their argument over this was that completion of the syllabus equips them with the necessary knowledge in Biology giving them an upper hand over questions. Majority of them were quick to admit that syllabus completion by Biology teachers was the only way through which Biology is made easier. This implies that syllabus coverage by the teachers not only creates confidence in students but also, makes the subject easier.

In this context, therefore, teachers’ coverage of Biology syllabus influences performance since learners will be equipped with the relevant Biology skills and efficient handling of practicals thus, improving the performance. KNEC (2000) reports indicate that candidates failed in questions whose answers depended on how well experiments outlined in the syllabus were covered. KCSE Biology exam covers the entire syllabus. Completion of the Biology syllabus implies confidence in both the teacher and the student. When the syllabus is covered early in the year, enough time is left for thorough revision affecting students’ performance.

**Teachers having too many Students in Class**

The recent introduction of government subsidized secondary education programme has seen the rise of enrolment in secondary schools. Most government secondary schools have classes that hold up to 70 students as observed in one of the schools. This poses a challenge to the teacher especially when assessing and evaluating students in class. The research therefore sought to establish the extent to which teachers having too many students in a class influences performance. It emerged that 89 of the student and 17 of the teacher respondents agreed that having too many students in a class influences performance. This is because having too many students in a class limits a teacher’s access to each student therefore a teacher will not be able to monitor each student properly hence, it will be hard for a teacher to identify areas of weakness that learners have. Too many students in a class overwork the teacher especially in terms of marking of the assignments and carrying out the assessment. This de-motivates the subject teacher which later affects the performance.

When interviewed to know why this was the case, one girl asserted, “Sisi class yetu ya Biology tuko wengi sana jambo ambalo humfanya mwalimu kutotupa assignments” (meaning, in our class, we are so many such that it becomes very hard for our teacher to give us an assignment). This implies that having too many students in a class makes students lose interest in the lesson and eventually in the subject. Some teachers argued that student numbers are far above the recommended (45 per class), making it difficult for them to manage the class. The author made observations to this effect. Some of the schools visited had a class number of 75 students. This number is way above what a teacher can
effectively handle to deliver positive results. This results in poor morale which influences performance in Biology. The author notes that for effective teaching and learning student numbers should not exceed 45.

**Teachers’ Inability to Communicate well with students due to Language Barrier**

Good communication is very important and a priority for teachers to get their objectives across to learners (Page, 2008). Inadequate communication encompasses not being precise enough and where content is not understood well or is rendered difficult to remember. Language barrier is a major problem for effective communication to occur. Teachers spend the vast majority of their day communicating with learners. Developing excellent communication skills is absolutely essential for effective teaching. The teacher must be able to share knowledge and ideas to transmit information to students (Page, 2008). Inability of a teacher to communicate well may result in students forming negative attitudes, which may affect performance of the subject. In order to validate this statement, the researcher asked respondents if teachers’ inability to communicate well with students due to language barrier influences performance.

From the study, most (154) students and 18 teachers agreed that teacher’s inability to communicate well with students influence performance in Biology. This is so because students will in most cases not understand the teacher due to the poor communication thus, complicating the subject further. Language problem in Biology also leads to confusion among learners, especially when it comes to pronunciation of difficult terms. Eventually, this leads to development of a negative attitude towards the teacher and the subject. Majority of the respondents agreed that good communication is essential in making the subject easier and interesting. This was in line with the assertion made by one of the students, that: “our Biology teacher does not know how to talk. He makes me bored with the lesson and more confused.” From the assertion, it was noted that it is not only what the teacher teaches that is important, but also how she/he expresses her/himself. Efficient self expression and good communication by a teacher therefore creates learners interest and positive attitude towards the subject.

Language barrier makes or causes students to lose interest, develop negative attitude towards the teacher and subject, and also places the students in a position where they lack the vocabulary to use when answering questions. If a teacher cannot get the message across clearly and motivate learners to effect it, then having the content is of less importance (Maxwell, 1999). This ends up affecting their performance. The study revealed language barrier to be an impediment to the learning process. Teachers should pronounce words correctly for effective communication, thus effective learning.

**Teachers’ ability to give Students Regular Assessments**

Assessments help students to improve their confidence in a subject. Through assessments, they may evaluate their weaknesses and strengths towards the discipline. Owing to this, the research sought to know whether or not teachers’ ability to give students assessments on a regular basis influences performance in Biology. The study established that majority (159) of the student and (19) teacher respondents agreed that teacher’s ability to give students assessments on a regular basis influences performance. Regular assessments by the teacher act as performance evaluation towards students in order to determine the understanding rate of the learners. This helps the teacher to identify the learners’ areas of weakness and working on that weakness hence, improving their performance. According to the respondents, frequent assessments help them get rid of the examination phobias that were most likely a deterrent to performance in Biology.

Similar sentiments have been expressed by Science teachers who attended an INSET in Uasin-Gishu district (SMASSE INSET, 2004). This is in line with a popular English adage that “practice makes perfect.” This implies that regular assessments are likely to initiate good performance in Biology as it will give students the necessary practice to answer questions. Regular evaluation helps students improve on concepts that have been perceived difficult. If a teacher fails to measure the level of learning taking place among students regularly, it becomes difficult to measure performance.

In conclusion, the study established that in a general overview 67% of the student respondents and majority (84%) of the teacher respondents agreed that; level of education, level of experience, health status, number of classes a teacher is allocated, material used by a teacher, teaching style, exposure to exams from other schools, coverage of syllabus, having too many students in class, inability to communicate well with students due to language barrier and finally, ability to give assessment on a regular basis, were the teacher factors affecting performance. Thirty-three percent of the student and 16 percent of the teacher respondents disagreed that teacher factors influence performance in Biology.

**CONCLUSION AND RECOMMENDATIONS**

On teacher related factors influencing performance of Biology in Eldoret Municipality, respondents viewed use of appropriate teaching methods and materials, manageable student numbers in class, teachers ability to communicate well (effective communication), and teachers giving regular assessment as factors leading
to good performance in Biology. On the other hand, the study revealed that large student numbers in a class, teaching staff shortage and teachers’ ill health lower students’ performance in Biology.

Based on the findings, the study recommends the following provision of adequate teaching and learning resources by; improving them where possible, standardizing equipment/resources for learning to allow schools with poor fees payment to secure them, government support and promote E-learning, building and equipping laboratories through donor aid funding. Regular assessment tests should also be done in order to: remove fear for examination or have examination phobia among learners by; promoting development technique for answering questions effectively, encourage learners to read enhancing conceptualization and understanding and revise tests and exams to correct mistakes. Furthermore, student teacher ratio should be manageable. This could be done by stakeholders building more classes where there are congestions and the government should allocate more resources for teacher employment to curb shortages.

In addition, there is need to improve teacher competence through regular in-service courses and seminars on capacity building for renewal purposes and breaking monotony for the teacher hence motivating them and regularize teachers to be trained as examiners so that they are aware of the techniques to impart in learners. Teachers affected by HIV/AIDS should also be supported so as to effectively manage their work. Teachers are a vital resource in the teaching learning process; hence their health is important for effective output.

REFERENCES


