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RESEARCH ARTICLE

**THE INFLUENCE OF PUPIL-TEACHER RATIO ON THE MANAGEMENT OF
TEACHERS' WORK BY HEAD TEACHERS IN PUBLIC PRIMARY SCHOOLS IN
UASIN GISHU COUNTY, KENYA**

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Abstract

The Free Primary Education (FPE) policy introduced in Kenya through the Ministry of Education, Science and Technology in January 2003 meant that in many schools, the head teachers found themselves with more children to enroll than their school capacity. These resulted in various logistical challenges as among them being over enrolment, shortage of teachers and introduction of over age children in different classes. Based on a study conducted in Uasin Gishu County, this paper examines the influence of the challenges of teacher-student ratios on the management of teachers' work in public primary schools by head teachers in Kenya. The study used a cross-sectional survey research design. The target population was all the 400 public primary head teachers in Uasin Gishu County. A sample size of 200 was selected using stratified random sampling technique. Data was collected using the questionnaires whose reliability was enhanced through a pilot study. Data was analyzed using descriptive (frequencies, percentages) and inferential (Chi-square) statistics with the help of the Statistical Package for Social Sciences (SPSS) software and presented in tables, and pie charts. The study found out that there was a high pupil/teacher ratio in public primary schools. This FPE challenge has significantly influenced the management of public primary schools by the head teachers in Uasin Gishu County. The study, therefore, recommends that the Government should train and employ more teachers to the ratio of 1:30. The findings of this study should stimulate continuous debate on FPE and also provide valuable insights that the government, stakeholders, scholars and researchers can rely on in their collective endeavour of addressing the challenges of making FPE initiative a success.

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INTRODUCTION

The various measures taken to implement FPE in Kenya have attained some positive results especially with regard to increased participation. When president Kenyatta announced free primary education in 1971, the enrolment in Standard One (first grade) rose from 397,000 in 1971 to 959,000 in 1972 (Bradshaw & Fuller, 1996). The

implementation of the free school milk programme in 1979 also saw an upsurge in primary school enrolments from 890,000 to 4.3 million between 1963 and 1983 (Bradshaw & Fuller, 1996).

The implementation of free primary education in Kenya in 2003 has been lauded as a success story in Africa. In its 2005 country report, the United Nations children's Fund (UNICEF) said that with a national primary enrolment rate near 80%, Kenya was making a significantly better progress in education than many of its East African neighbours (UNICEF, 2008). It was estimated that the NER rose from around 6,314,726 to 7,614,326 by the end of the year (2003), representing a 22.3% increase nationally. It was also estimated that another 3 million children were not enrolled in school.

Despite the various logistical problems that seem to hamper a successful implementation of the FPE, the policy sounds commendable as it has meant cushioning children from poor socio-economic backgrounds, especially girls from failing to participate in primary education or dropping out of school due to lack of fees and other school levies. Overall, the policy intervention could prove determinative in the efforts to achieve UPE (Republic of Kenya, 2004).

The public response to the introduction of FPE was overwhelming and created access shock. Enrollments jumped by 22 per cent in Kenya. This led to overcrowded classrooms; double and triple shifts, and shortages of teachers, textbooks, and materials. Many enrolled were over age pupils who should have been taking adult education (UNESCO, 2004). Schools were overwhelmed in Kenya by the arrival of new students. While most classes were set up for about 30 pupils, the introduction of free schooling swelled class sizes in some cases to more than 100. In the past, because of school fees, many of the poor people would give preference to food instead of sending kids to school. "There was a very big influx in schools, and the school authorities made children go to school in shifts, in some schools, students learn under trees, out in the open" (Kojwang, 2003, p. 36).

Van't Erve (2003) reiterates that classes of around hundred children are no exception in Kenya. Teachers working double shifts are no exception either. Mutua (2005) also points out that following the introduction of Free Primary Education, schools have witnessed overcrowding in lower primary as a result of increased enrolments, from 5.9 million to above 7.2 million. There are 7.5 million primary school children in both formal and non-formal learning centers (Mutua, 2005).

Kipchirchir, Mutiso, Kemboi and Chesire (2011) have carried out a study on the impact of FPE on performance of teaching stakeholders in Kenya, a case of public primary schools in Bungoma East District. Their study pointed out that the rapid increase in numbers of pupils has created constraints and challenges to successful implementation of FPE in Kenya thereby compromising the quality of education. The findings of the study indicated that there was shortage of teachers, teachers were unable to mark students' assignment in time, improper management of finances by head teachers and education officers are not able to inspect schools regularly. The study recommended the need for the Government to employ more teachers and all heads of schools should be given educational training on how to properly managed school activities.

Tooley, Dixon and Stanfield (2011) have carried out a study on the impact of FPE on Kenya education management, a case study of private schools in Kibera settlements, Nairobi. The research found less beneficial outcome of the FPE intervention in Kenya. They pointed out that, although enrolments had increased in Government public primary schools, this needs to be balanced against a much larger reported decrease in enrolment in private schools in the informal settlement. The research identified 76 private students who were not on the official Government list of schools. Moreover, focus groups with parents reported dissatisfaction with Government schools and satisfaction with private schools since the introduction of FPE. The findings pointed out an alternative route to ensuring 'education for all' by embracing, rather than ignoring, the role currently played by private sector.

The Teaching Force

As a result of the introduction of free primary education in Kenya, the situation of the teaching force in most of the districts is generally bad. Teachers complain of increased pupil/teacher ratios. Many primary schools are understaffed as a result of the free primary education programme. This does not augur well for the quality of education being delivered. As a result of the ban on levies many school management committees are unable to recruit extra teachers through PTAs.

Teachers are normally motivated by adequate pay. But the classroom boom has not translated into better pay for the teachers, who went on strike in 1997 to demand the implementation of a salary award that gave them a rise of 200 to 400 per cent. The Government came to an agreement with the Kenya National Union of Teachers which spread the award over a decade.

It is a small consolation for teachers bombarded with strident demands for quality education. Some teachers have argued that forging ahead without assessing their pupils defeats the purpose of education and that it is impossible to mark 60 to 70 exercise books three or four times a day. A teacher handles two to three subjects a day in primary schools. If effective learning is to take place, the teacher-pupil ratio should be one to 30 at most. But the learning windfall in Kenya now means that some teachers have to handle up to 70 pupils per class (Oyaro, 2003).

Quality teachers are the cornerstone of quality education. Indicators suggest that a minimum of 15 million new teachers will be needed by 2015, but the ravages of HIV/AIDS may mean that this figure is too low. Alarm has been raised in many parts of the world about the growing shortage of teachers, their low salaries, poor working conditions and poor training, all of which has contributed to a steady decline in their status and consequently provision of low quality education (UNESCO, 2003).

Fleshman (2005) posits that school authorities have had to make hard choices between spending the little money they have on teaching and learning facilities or on hiring teachers, often times, head teachers have resorted to diverting funds for supplies and construction to hiring more teachers (Fleshman, 2005). The irony, however, is that while schools struggle with teacher shortages, the country has a large pool of unemployed teachers. It is estimated that over 40,000 qualified teachers are unemployed (Anami, 2010).

Since 1998, the Government has imposed a freeze on the hiring of teachers. This has been partly a response to fiscal pressures following the increase of teachers' salaries in 1997, as well as part of the wider public sector reform program (PSRP) initiated in the early 1990s under the Structural Adjustment Program (Mutahaba & Kiragu, 2002).

MATERIALS AND METHODS

This study was carried out in Uasin Gishu County of Kenya. It used a cross-sectional survey research design. This design was chosen because it is used for collecting information at a single point in time which was the case in this study. This study was concerned with the investigation of the influence of FPE challenges on public primary school management by the head teachers in Uasin Gishu County.

The target population for the study comprised all the 400 public primary school head teachers in Uasin Gishu County. There are 360 public primary head teachers in Uasin Gishu (Eldoret East, Warend, and Eldoret West) County and 40 in Eldoret Municipality, forming a total study population of 400 respondents (MOEST, 2003). The sample size was obtained by using the Table by Kathuri and Pals (1993). Given that the population of the study (N) was 400, then the sample size (S) obtained from the table was 200 respondents (Kathuri & Pals, 1993). The study used stratified random sampling technique and to obtain the required items from each stratum, the author used simple random sampling technique in which case the names of the head teachers were written on slips of paper, which were then mixed thoroughly in a container. A questionnaire was used in collecting relevant data. The data generated by questionnaires was subjected to both descriptive (percentages, frequencies) and inferential (Chi-Square) statistics. The questionnaires were first subjected to coding to reduce the mass of data obtained to a form suitable for analysis. The data were then entered into the SPSS computer software program and analyzed using descriptive statistics.

Chi-square (χ^2) test of association technique was used to further analyze the data. Chi-square test was most suitable since it enabled the determination of whether there were any significant influences in the frequencies of the alternative responses under consideration and hence be able to reject or accept the hypotheses set. Chi-square (χ^2) test was used because the data that the author collected was of the type "one-variable-many-levels" and was basically categorical frequencies of the description of the experiences of respondents on the influence of free primary education policy challenges on school management. All data were analyzed at a level of significance of 0.05.

RESULTS AND DISCUSSION

This study sought to determine the influence of pupil-teacher ratio on the management of teachers' work in the school by the head teachers in public primary schools in Uasin Gishu County. It was thus hypothesized that there is no significant influence of pupil/teacher ratio on the management of teachers' work by the head teachers in public primary schools in Uasin Gishu County. Management of teachers by head teachers in the study referred to the supervision of the teachers in the work they do in the school such as preparation of schemes of work and lesson plans; class attendance; marking of pupils' class work; giving assignments to pupils and completion of the syllabus.

Over 50 Pupils per Teacher per Class (Pupil/Teacher Ratio)

Table 1 presents a summary of the responses of the head teachers to the item that tested whether or not there were over fifty (50) pupils per teacher per class in their schools. Out of 190 head teachers, majority, 178(93.7%), agreed and only 10(5.3%) disagreed, while 2(1.1%) were undecided.

Table 1: There are Over 50 Pupils per Teacher per Class

Respondents	Frequency	Percentage
Strongly disagree	8	4.2
Disagree	2	1.1
Undecided	2	1.1
Agree	61	32.1
Strongly Agree	117	61.6
Total	190	100

From these results, the study established that there is a high pupil-teacher ratio in public primary school in Uasin Gishu County. This was evidently depicted by majority of the head teachers, 178(93.7%) who agreed with the statement which tested whether there were over fifty pupils per teacher per class in their public primary schools in Uasin Gishu County. These findings were found similar with other studies done in other districts in Kenya. These results showed a pupil: teacher ratio of over 50 pupils per teacher per class which is above the recommended ratio of 1:30 (Ministry of Education [MoE], 1988) implying that there is over enrolment in public primary schools in Uasin Gishu County

A study by Yara and Rita (2012) found similar results of over-enrolment in the public schools in Migori District. A study by Orutu (2012) also found that with the introduction of FPE, pupil teacher ratio went high (60:1) in Nyamira District, resulting in poor syllabus coverage, pupils with special needs not catered for, indiscipline of pupils due to large classes, inadequate attention to pupils, and poor academic performance in national examinations. The Economic Survey (2009) has also depicted similar results of high increase in enrolment in public primary schools in Kenya after the introduction of FPE, up from 5.9 million in 2002 to 7.5 million in 2005 and to 8 million in 2009, when FPE was launched in 2003. The gross enrolment rate stood at 104.8% in 2009 as compared to 93% in 2002. Kadzamira, Chibwana, Parker and Serano (2000) also point out that the pupil-teacher ratio went high (68:1) in upper grade and (119:1) in lower grades when free primary education was introduced in Malawi.

According to Kipkoeh, Cheruto and Wambua (2010), on Management Challenges Facing the Implementation of Free Primary Education in Kenya; A case of Keiyo District, many schools in Keiyo District have had an overwhelming increase in enrollment and the average class sizes have risen from 40 to 70 while facilities remain the same. A study by Akoth et al. (2012) also points out that there has been a high enrollment in public primary schools in Kisumu Municipality as a result of implementation of FPE. Similar results have been noted by Oyaro (2003), that with the introduction of free primary education, there were 70 pupils per teacher per class in public primary schools in Kenya. Wamukuru et al. (2006) also point out that with the introduction of FPE, the number of pupils has exceeded the available human and physical facilities in the 18000 public primary schools in Kenya. The teacher to pupil ratio has steadily increased from the recommended 1:30 pupils per class to between 1:60 and 1:90 pupils per class (MoEST, 2004).

The implication of high pupil/teacher ratio is that there is a compromise on the quality of education in the public primary schools in Kenya and it also jeopardizes effectiveness of teaching and learning. High pupil/teacher ratio

affects pupil/teacher interaction in the classroom which is the epitome of learning. However, most studies done on FPE have not paid specific attention to this possible influence of FPE challenges on management variables

Schemes of Work and Lesson Plan Preparations

Table 2 summarizes the responses of the head teachers on the item that assessed whether or not with the introduction of free primary education, teachers do not prepare schemes of work and lesson plans. From these findings, majority of the head teachers 107(56.3%) disagreed with the statement, while 83(43.7%) agreed, and none of them were undecided.

Table 2: Teachers do not Prepare Schemes of Work and Lesson Plans

Responses	Frequency	Percentage
Strongly Disagree	31	16.3
Disagree	76	40.0
Agreed	65	34.2
Strongly Agreed	18	9.5
Total	190	100

These findings established that teachers prepared the schemes of work and lesson plans for teaching. Majority (56.3%) of the respondents disagreed with the statement that teachers did not prepare the schemes of work and lesson plans for teaching.

Test of Association between Pupil/Teacher Ratio and Teachers' Preparation of Schemes of Work and Lesson Plans

Chi-Square analysis was carried out on the head teachers' responses to the item that assessed whether or not with the introduction of FPE, pupil/teacher ratio has surpassed 50 pupils per teacher versus the responses to the item that tested teachers' preparation of schemes of work and lesson plans. The data was categorized into those who agreed and those who disagreed and undecided in each variable and entered into the SPSS computer software and cross tabulated. The results obtained showed no significant relationship, $P=0.68 > 0.05$. Thus the null hypothesis was accepted and conclusion made that there was no significant association between high pupil teacher ratio and the preparation of schemes of work and lesson plans by the teachers. It was, therefore, concluded that the introduction of free primary education did not influence the management of teachers' preparation of schemes of work and lesson plans.

These results implied that the introduction of FPE and the subsequent increase in pupil-teacher ratio did not influence the teachers' preparation of schemes of work and lesson plans. Planning is the professional responsibility of all individual teachers. Making schemes of work and lesson plans is important as it takes into account the particular needs of a particular class. The schemes show the content of work to be covered in a term and a lesson plan shows what is to be covered during a period in a class.

Teachers' schemes of work and lesson plans are professional documents prepared by teachers for the purpose of presentation of a lesson. The teacher indicates whether the lesson has been taught and objectives achieved. If not taught then the teacher indicates the reason and when he intends to cover it. If lesson objectives are not achieved, the teacher plans for remedial lesson to make the concept be understood by pupils.

The success of any teaching depends on the teachers' preparations of the schemes of work and lesson plans. It is, therefore, imperative that head teachers monitor the schemes and lesson preparation frequently; otherwise if not done; it may lead to poor academic performance of the schools. The study therefore concluded that despite the introduction of FPE and the subsequent increase in pupils' enrolment, teachers were still making their schemes of work and lesson plans.

Similar findings have been found by Reche, Bundi, Riungu and Mbugua (2012), in their study on Factors contributing to poor performance in KCPE in public primary schools in Mwimbi District, Kenya, where majority (83%) of the head teachers accepted that teachers were preparing their schemes of work and lesson plans for teaching. The implication of this is that teachers may be preparing the schemes of work and lesson plans as a requirement but may not be implementing them. These findings therefore point out that more attention and care

should be given by the head teachers and Inspectors of schools to ensure that teachers implement what they have planned.

Class Attendance by Teachers

Table 3 shows the head teachers' responses to the item that assessed whether or not the teachers' class attendance had declined with the introduction of free primary education policy in public primary schools in Uasin Gishu County. Majority of the respondents, 127(66.9%) disagreed while 59(31.1%) agreed and only 4(2.1%) were undecided.

Table 3: Teachers Class Attendance Decline

Response	Frequency	Percentage
Strongly disagree	63	33.2
Disagree	64	33.7
Undecided	4	2.10
Agree	49	25.8
Strongly agree	10	5.3
Total	190	100.0

From these findings, the study established that despite the challenges emanating from the introduction of FPE, teachers still attended their lessons, with majority of the respondents (66.9%) disagreeing that class attendance declined. This was interpreted to mean FPE did not influence the management of teachers' class attendance. Thus despite the increase in pupils' enrolment in the wake of FPE, teachers were attending to their classes as before. These results concurred with those from a survey by Toshiba (2012) in Taita Taveta and Machakos County, which showed that, with the introduction of FPE, majority (90%) of the teachers still attended their classes and only 10% failed to attend classes despite being in school. Teacher absenteeism was much higher in Taita Taveta compared to Machakos County (Toshiba, 2012). The implication of this is that although teachers attended their lessons, the head teachers and inspectors of schools still need to ensure that efficient and effective teaching and learning is going on, and not merely class attendance.

Completion of the Syllabus by Teachers

Table 4 illustrates the head teachers' responses to the item that tested if with the introduction of FPE policy, teachers were completing the syllabus. Majority (63.7%) of the respondents agreed while some (36.3 %) disagreed and none of them was undecided.

Table 4: With the Introduction of FPE, Teachers Completed the Syllabus

Responses	Frequency	Percentage
Strongly disagree	22	11.6
Disagree	47	24.7
Agree	86	45.3
Strongly Agree	35	18.4
Total	190	100

As illustrated in Table 4, majority of the respondents, (63.7%) agreed that, with the introduction of FPE in public primary schools in Uasin Gishu County, teachers were still able to complete the syllabus with 36.3% who disagreed.

Test of Association between Pupil/Teacher Ratio and Teachers' Completion of the Syllabus

Chi-Square analysis was done on the head teachers' responses to the item that assessed pupil/teacher ratio and the item that assessed teachers' completion of the syllabus. The data was categorized into those who agreed and those who disagreed and undecided in each variable and entered into the SPSS computer soft ware and cross-tabulated. The results obtained showed no significant relationship, $P=0.18>0.05$, hence the null hypothesis was accepted and

concluded that there was no significant influence of FPE challenges (high pupil ratio) on the management of teachers' completion of the syllabus.

These results were interpreted to mean that despite the increase in pupil-teacher ratio, the teachers were still able to complete the syllabus. These findings concurred with the findings by Wachira, Mwenda, Muthaa and Mbugua (2011) in their study on the impact of FPE on management of primary schools in Embu District Kenya. They found out that with the introduction of FPE, 53.3% of the respondents agreed that the syllabus for various subjects were fully covered, and 43.7% of them disagreed. Oketch, Mutisya, Ngware, Sagwe and Musyoka (2011), on the effect of active teaching and subject content coverage on students' achievements evidence from primary schools in Kenya, also point out that content coverage (syllabus) positively and significantly influences the pupils' achievement in the Kenya Certificate of Primary Education.

Inadequate Supervision and Support for Teachers by Education Officers

Table 5 summarizes the head teachers' responses to the item that tested whether there was adequate support from the quality assurance education officers. Majority of the respondents, 129(67.9%), agreed that there was inadequate supervision and support, and a few, 59(31.1%) disagreed while only 1(1.1%) was undecided.

Table 5: Inadequate Supervision and Support for Teachers by the Quality Assurance Officers

Responses	Frequency	Percentage
Strongly disagree	23	12.1
Disagree	36	18.9
Undecided	2	1.1
Agree	89	46.8
Strongly Agree	40	21.1
Total	190	100

Based on these findings, the study established that with the introduction of FPE, there was inadequate supervision and support from the quality assurance officers for teachers, with 67.9% of the respondents agreeing with this statement. Education officers visit schools to enlighten, motivate and correct teachers on where they may have gone wrong in the performance of their work and hence set standards. When they fail to offer this support as illustrated in these results, teachers tend to relax and consequently this affects the academic performance of the school. Inspection is concerned with the improvement of standards and quality of education and hence need for the education officers to ensure that schools are inspected regularly.

Inspection is a powerful way of monitoring the education system, tracking standards, and performance levels over a period of time and identifying the school failures and successes in order to enable them plan improvement strategies (Republic of Kenya, 1999). Wazare (2012) posits that there is inadequate inspection of schools in Kenya and points out some of the problems facing the current inspection practices in Kenya such as lack of transport, cost of inspection, inspector recruitment, selection and deployment and adequacy of inspectors.

Adequacy of Teachers

Head teachers were asked to respond to the statement that tested whether or not with the introduction of FPE, there was shortage of teachers. Table 6 presents the head teachers' responses on adequacy of teachers. Majority, 90.5% agreed that there were shortage of teachers in Uasin Gishu County, and a minority 8.5% disagreed, while 1.1% were undecided.

Table 6: Shortage of Teachers

Responses	Frequency	Percentage
Strongly disagree	6	3.2
Disagree	10	5.3
Undecided	2	1.1
Agree	76	40.0
Strongly agree	96	50.5
Total	190	100

These study findings established that there were shortages of teachers in public primary schools in Uasin Gishu County. Majority of the respondents, 90.5%, agreed there was shortage of teachers while 8.5% disagreed and 1.1% were undecided. This was interpreted to mean that if teachers are few, the pupil-teacher ratio becomes high and hence pupil teacher interaction declines. Marking of pupils' work becomes difficult and individual pupil progress cannot be assessed properly. This consequently affects the academic performance of the pupils. The teacher is the locus of classroom instructions and curriculum delivery. Teachers are the frontline service providers in education (MOE, 1999). Delivery of quality education is hence critically dependent on having a sufficient supply of appropriately trained and motivated teachers.

Wachira, Mwenda, Muthaa and Mbugua (2011) have found similar results in which majority of the respondents, 56.3%, agreed there were inadequate teachers in schools in Embu West District and 43.8% disagreed. In Kenya, teacher shortage currently stands at 40,223 in primary schools (Republic of Kenya, 2009). The UNESCO (2005) national representative report study of the implementation of FPE in Kenya has revealed that on average, the schools visited were short of two to three teachers. A much larger teacher workforce is needed to respond to the increased enrolment.

Similar results have been found by Akoth (2012), who posits that the head teachers have experienced a number of problems in relation to the implementation of FPE which included understaffing, poor teaching, and overcrowded classes. Kipkoech, Cheruto and Wambua (2010) have also found similar results with 90% of the head teachers, 64.2% of the education officers and 83.7% of the teachers agreeing in their study that there was shortage of teachers and support staff in Keiyo District.

Teachers Fatigued because of too Many Books to Mark

Table 7 shows the distribution of the head teachers' responses to the item that assessed whether or not with the introduction of FPE, the teachers were fatigued because of marking too many pupils' class work. Majority of the head teachers, 174(91.6%) agreed and 16(8.5%) disagreed while none of them was undecided.

Table 7: Teachers Fatigued because of too many Books to Mark

Responses	Frequency	Percentage
Strongly disagree	10	5.3
Disagree	6	3.2
Agree	59	31.1
Strongly agree	115	60.5
Total	190	100

Based on these findings, the study established that with the introduction of FPE teachers were fatigued because of marking many pupils' class work with majority (91.6%) of the head teachers attesting to this statement. Fatigue affects performance of work. This was interpreted to mean that, with the introduction of FPE, teachers are not performing their tasks in school effectively due to fatigue from too much work.

Alubisia (2005) agrees with this findings and points out that the workload of teachers has doubled since the introduction of FPE, and when compounded with negative attitude towards the profession many teachers have become disinterested in teaching and have turned to other income generating activities. Motivation is the driving force to achieve something. Fatigue is due to handling large classes and pupils with varied needs. The head teachers have difficulties with teachers who have given up or who are overwhelmed with work or unable to control large classes (Arnold, 1991).

Association between Pupil/Teacher Ratio and Marking of Pupils' Class Work

Chi-square cross tabulation was carried out on the head teachers' responses to the item that tested the pupil teacher ratio with the responses to the item that tested the marking of pupil's class work. This was done in order to

determine if there was any significant influence of pupil/teacher ratio on the management of teachers' marking of pupils' class work by the head teachers in public primary schools in Uasin Gishu County.

The data was categorized into those who agreed and those who disagreed and undecided in each variable and entered into the SPSS computer software and cross tabulated. The results showed that there was a significant association between the two variables at $P = 0.00 < 0.05$ and thus the null hypothesis was rejected as there was a significant relationship between, pupil teacher ratio and teachers marking of pupils' class work and hence the two variables were not independent of each other. The study, therefore, concluded that there was a significant influence of FPE challenges (pupil/teacher ratio) on the management of teachers' marking of pupils' class work by head teachers in Uasin Gishu County. This implied that teachers were not marking pupils' class work effectively as required.

This study, therefore, concluded that with the introduction of free primary education, teachers had too many books to mark and hence were fatigued. This was evidenced by majority of the respondents, 174(91%), who agreed while a minority (8.5%) disagreed (16/190) and none of them were undecided. Moreover, there was a significant relationship ($0.00 < 0.05$) between pupil/teacher ratio and marking of pupils class work. This implied that pupil/teacher ratio, has significantly influenced the management of teachers' marking of pupils' class work. These results concurred with what Oyaro (2003) observes, that 'teachers argued that, it was impossible to mark 60 to 70 exercise books three or four times a day'. Similarly, Akoth et al. (2012) note with the introduction of FPE, teachers have come to experience heavy workload due to understaffing. Yara et al. (2012) say that there has been lack of motivation among teachers as well.

Similar findings have been found by Wachira, Mwenda, Muthaa and Mbugua (2011) who conclude that FPE has negatively impacted on the management of staff. They observe that majority of the classes have more than 50 pupils per class. The government requirement is a class of 30 pupils per teacher per class. This implies that there were many pupils out there who could not afford education due to lack of fees. Chuk (2009), in a similar study in Nairobi, has identified similar findings. However, it was noted that some parents withdrew their children for fear that with large number of pupils per class, the quality of education may go down.

Shift Teaching Effect on Teachers

Table 8 presents the distribution of the head teachers' responses to the item that assessed whether or not teachers were fatigued due to shift teaching in their schools, which arose due to the introduction of free primary education policy. Majority of the head teachers, 109(57.3%), agreed, 63(33.2%) disagreed and 18(9.5%) of them were undecided.

Table 8: Teachers Fatigued because of Shift Teaching

Responses	Frequency	Percentage
Strongly disagree	23	12.1
Disagree	40	21.1
Undecided	18	9.5
Agree	81	42.6
Strongly agree	28	14.7
Total	190	100

Pupil/Teacher Ratio and Teacher Fatigue due to Shift Teaching

Chi-square analysis was carried out on the head teachers' responses to the item that tested whether with the introduction of FPE; there was a high pupil-teacher ratio in their schools versus their responses on the item that assessed whether teachers were fatigued due to shift teaching. The data was categorized into those who agreed and those who disagreed and undecided in each variable and entered into the SPSS computer software and cross tabulated. The results showed significant relationship ($P=0.05=0.05$), thus the null hypothesis (H_0) was rejected and concluded that there was a significant relationship between the two variables.

These results demonstrated that there was shift teaching in Uasin Gishu County and teachers were fatigued, because of too much work of having to teach the same lessons twice in a day, 57.3% of the respondents agreed with this statement. The implication of this is that, if teachers are fatigued their performance of work in the school declines and this affects the academic performance of the school. Wachira et al. (2011) found similar results in Embu West District. They point out that due to lack of classrooms, some classes were taught in shifts. They found out that there was too much workload on the teachers and 43.7% singled out the issue shift teaching due to large classes as the reason why syllabus were not fully covered though majority, 56% agreed that it was fully covered.

Pupil-Teacher Interaction

Table 9 illustrates the responses of the head teachers to the item that assessed whether or not with the introduction of free primary education, there was less interaction between the pupil and the teacher in public primary schools in Uasin Gishu County. Majority of the head teachers, 134(70.5%) agreed that there was less pupil-teacher interaction, while a few, 52(27.3%) disagreed and only 4(2.1%) were undecided.

Table 9: There is less Pupil Teacher Interaction

Responses	Frequency	Percentage
Strongly disagree	16	8.4
Disagree	36	18.9
Undecided	4	2.1
Agree	81	42.6
Strongly agree	53	27.9
Total	190	100

These results indicated that with the introduction of FPE, there was less pupil-teacher interaction in the public schools in Uasin Gishu County, with 70% of the respondents agreeing, 27.3% disagreeing and 2.1% being undecided. These results depicted that there is less individual pupil attention by teachers, meaning that some pupils are not being attended to and more so the slow learners. This affects the academic performance of these pupils.

Test of Association between Pupil/Teacher Ratio and Pupil/Teacher Interaction

Cross-tabulation on the head teachers' responses to the item that assessed whether with the introduction of FPE, the pupil teacher ratio rose to over 50 pupils per class ($1 > 50$) versus teacher pupil interaction was carried out. The data was categorized into those who agreed, those who disagreed and those who were undecided in each variable and entered into the SPSS computer software and cross tabulated. In this analysis, significant association was noted ($P=0.048 < 0.05$) and thus the null hypothesis was rejected and concluded that there was a significant association of pupil/teacher ratio and pupil teacher interaction. The study, therefore, concluded that there was a significant influence of pupil teacher ratio on the management of pupil teacher interaction in the public primary schools in Uasin Gishu County.

Wachira et al. (2011) have found similar findings in Embu West District. They concluded that FPE has impacted negatively on the management of pupils. They also pointed out that pupils lack individual attention from the teachers due to large number of pupils per teacher per class. Information they obtained indicated that 58.7% of teachers are able to provide individualized attention to slow learners while 41.3% were unable due to large classes.

Wax (2003) also points out that with the introduction of FPE in Kenya some pupils have never had a chance to formally meet their teachers. Majanga et al. (2011) have concluded that FPE policy has created high enrolments which have resulted in high pupil teacher ratio of 1:80 in lower classes and 1:50 in upper classes. This has affected classroom interaction because teachers find it difficult to give personal attention to all the pupils. A UNESCO (2005) report indicates that attention in overcrowded classrooms in Kenyan primary schools is mostly given to brighter pupils while weaker pupils are left out. Moreover, within classrooms teachers have to yell to be heard.

High Pupil-Teacher Ratio and Quality of Teaching and Learning

The head teachers were asked to respond to the statement which assessed whether or not high pupil-teacher ratio has lowered the quality of teaching and learning in public schools in Uasin Gishu County. Majority of the head teachers, 170(89.5%), agreed while 16(8.5%) disagreed and 4(2.1%) were undecided.

These results demonstrated that high pupil-teacher ratio has lowered the quality of teaching and learning in Uasin Gishu County with a high percentage (89.5%) agreeing with this statement. Thus as discussed, the study established that high pupil-teacher ratio has resulted in poor pupil-teacher interaction, led to poor marking of pupils' assignments, teachers fatigued and subsequently and consequently lowered the academic performance of pupils in the public primary schools in Uasin Gishu County. The study therefore concluded that FPE challenges (high pupil/teacher ratio) have significantly influenced the management of teachers' performance of work in school.

CONCLUSION AND RECOMMENDATIONS

From the study findings, it is clear that with the introduction of FPE there has been an increase in pupils' enrolment, shortage of teachers, high pupil/teacher ratio, and poor pupil-teacher/interaction in public primary schools in Uasin Gishu County. The study further established that teachers are not adequately marking pupils' exercise books (class work) and that teachers are fatigued because of having too many exercise books to mark and also due to shift teaching which arise due to increase in enrolment and shortage of classrooms.

It was further determined that there is a significant association between the respondents' responses to the item that tested pupil/teacher ratio and marking of pupils' exercise books as well as shift teaching and pupil/teacher interaction. This means that FPE challenges (high pupil/teacher ratio) have significantly influenced the management of teachers' work in public primary schools by the head teachers in Uasin Gishu County. It was therefore recommended that there is need for the government to address the FPE challenge of high pupil-teacher ratio so as to be reduced to the recommended ratio of 1:30 for efficient and effective public primary school management to be achieved.

It was, however, noted that despite the increase in pupils' enrolments, teachers still do prepare their lesson plans and schemes of work, attend their classes and complete the syllabus, although there is inadequate support for teachers from the quality assurance officers. There is therefore no significant association between high pupil/teacher ratio and teachers' preparation of schemes of work and lesson plans and completion of the syllabus.

It is further recommended that there is need for the Kenya government to train and employ more teachers to ensure that pupil teacher ratio is maintained at a ratio of 1:30 in order to improve on pupil/teacher interaction, marking of pupils' class work, eliminate shift teaching and hence ascertain quality teaching and learning in public primary schools in Kenya.

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