Effects of Teacher Recruitment and Utilization Policy on Quality of Secondary School Education in Kenya

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Abstract: *The teacher recruitment and utilization policy is demand-driven, operating under decentralized system. Teachers are recruited in schools where there exists vacancy. The researcher sought to establish the following: extent of implementation; strengths and weaknesses; challenges in implementation; attitudes, opinions and perceptions on the policy; effect on quality of education; and ways of enhancing the policy. Causal comparative design was used. The study targeted teachers, head teachers, Teachers Service Commission officials and Kenya National Examination Council. Multistage, cluster, stratified and random sampling techniques were used. Two questionnaires, an interview guide and a document analysis guide were used. Data were analyzed using frequencies, percentages, means, standard deviations, analysis of variance, t-test, regression analysis and content analysis. Majority of the schools were understaffed, while a few were either well staffed or overstaffed. The policy has minimized overstaffing. However, more is yet to be done on understaffing. There was significant relationship between implementation of the policy and mean examination scores. The test indicated significant relationship between teachers' subject specialization and the mean examination scores. It was concluded that, the policy did not guarantee high quality education in schools. It was recommended that, the policy be revised for adequate staffing and high quality education.*
Key words*: education, effects, policy, quality, recruitment, teacher, utilization*

I.   Introduction

Teacher recruitment and utilization policy is the guiding principle that guides and governs recruitment and utilization. Policy gives direction of action to organizational activities and procedures. For any organization to survive it has to have clear, workable and rational policies. Despite the important role of policy in a society, imprudent formulation and implementation of policies may lead to adverse effects. Policies are appropriate under given conditions and time after which they may become obsolete. Thus, there is need for policy analysis at different stages of development and implementation. According to Patton (1990) policy analysis is the process through which we identify and evaluate alternative policies or programs that are intended to lessen or resolve social, economic, or physical problems. This may ensure the necessary changes and innovations are made on the existing policy so as to reap its complete benefit.

In Kenya, teachers' recruitment and deployment is done by the Teachers Service Commission (TSC). The TSC was established by the TSC Act CAP 212 of the Laws of Kenya (Republic of Kenya, 1968). TSC since its inception in 1967 had been employing teachers through supply-driven process. It was until 1998 when the government of Kenya froze teacher recruitment as a cost cutting measure. Consequently, there was understaffing in schools. This led to adoption of demand driven policy on teacher recruitment in 2001 (TSC, 2002). Under demand-driven teacher recruitment policy the government has been employing limited number of secondary school teachers annually. However, this does not cater for the actual shortfall. The Kenya National Union of teachers puts the total figure of teachers' shortage at 60,000 (Daily Nation, 9 June 2006).

Quality education is the education that best fits the present and future needs of the particular learners in question and the community, given the particular circumstances and prospects. The quality concept also has to embrace the development of the potential of every member of each new generation (Coombs, 1985). A good teacher recruitment and utilization policy should therefore enshrine such notion. Teachers play a significant role in ensuring quality education in schools. They manage and provide leadership to schools, develop and implement curricula. For these services to be effectively accomplished, teachers must be adequately recruited and deployed in schools. Sessional paper No1of 2005 a policy frame work for Education, Training and Research in the 21st Century and the Kenya Education Sector Support Programme (KESSP) (Republic of Kenya, 2005) have identified teachers as one of the most important inputs to the education system. The efficient management and utilization of this resource, therefore, remains critical to the quality of learning outcomes.

There are many ways of determining teachers staffing requirements. Some of these norms include Curriculum Based Establishment (CBE), Pupil-Teacher Ratio (PTR), Subject Cluster, Number of Teachers per Class, and Class Size. Secondary school teachers staffing needs in Kenya are determined based on the CBE. It

was necessary to study the effects of teacher recruitment and utilization policy on quality of secondary education so as to undertake the necessary measures.

Table 1: Trend in Secondary Schools' Number of Teachers, Students and Schools in Kenya

Year	2005	2006	Difference %
Teachers	44857	433620	-2.8%
Students	934149	1030080	10.3%
Schools	4169	4247	1.9%

Source: MoEST (2006)

Table 1 show that the number students and schools had increased while that of teachers had reduced. This led to shortage of teachers, where there was more students to be taught by a less number of teachers. It implied some student were not taught some subjects; limited choice of subjects to students; overloaded teachers; and lack of continuity in learning. This could have led to narrow based knowledge; low mastery of subject matter; poor performance in KCSE; negative attitudes towards teaching and learning; and, hence low quality education.

Student learning occurs mainly as a result of students' interaction with teachers, other students, and the curriculum. The characteristics of teachers are one of the indicators of school quality. Students learnt more from teachers with high academic skills and teachers who teach subjects related to their undergraduate or graduate studies than they do from teachers with low academic skills and teachers who teach subjects unrelated to their training. They learn more from teachers with more teaching experience than they do from teachers with less experience; and they benefit from being in smaller classes (Mayer, Mullens, Moore, & Ralph, 2000).

Teachers play a very important role in the performance of school. The quality and quantity of teachers all contribute to performance. Bett (1986) in a study of the factors affecting performance indicated that teachers are a crucial factor influencing the levels of performance. The study revealed that unequal distribution of graduate teachers and ineffectiveness of teachers and headteachers has an impact on the levels of performance to both students and schools. The study conclusively identified the quality of teaching staff as the main determinant in the achievement of students in the examination. According to Maranga (1982) the quantity of teachers has also an effect on the levels of performance. The quantity of teachers in Kenya is determined by their supply and demand.

According to Kinyanjui (1979), the caliber of teachers in any school or school system forms an important input variable which can have tremendous impact on school outcome. Eshiwani (1984) showed that, headteachers were instrumental in performance for they monitor all the activities in their schools. Hence, Maundu (1986) recommended the need to set the minimum level of experience a teacher should acquire before being promoted to school leadership.

A World Bank report (1987) noted that the number of years of schooling of a teacher was the most consistently positive and significant contributor to pupils achievement. Kibui (1995) in his research observed that poor promotion and frequent transfers may demoralize the teachers' commitment to effective teaching. According to Eshiwani (1983) in a study carried out on factors influencing performance in examinations among primary and secondary school students in Western Province of Kenya established that the number of untrained teachers had far exceeded that of trained teachers in the region. It was found that in 1975 the proportion of untrained teachers teaching in secondary schools in Western Province was 44.61 percent, while in 1983 it had risen to 60 percent. The proportion of untrained teachers in the province was above the national average. This was found to contribute to low examination grades in the province.

II. Statement of the Problem

From the background it seems that a major factor in the poor performance in the education sub-sector has been due to the prevalence of inappropriate policies which either possibly hindered or at least failed to adequately assist educational development. It is clear that teacher recruitment and utilization policy may have affected quality of secondary education. Though the government has been employing teachers annually, there has been a shortfall. Hence, there is fear that the quality of secondary education could be compromised. The World Bank (2005) study on "Recruiting, Retaining, and Retraining Secondary School Teachers and Principals in Sub-Saharan Africa" found that in many parts of Sub-Saharan Africa, the projected demand for secondary school teachers exceeds projected supply, in some cases by substantial amounts. The Ministry of Education Science and Technology, on Teachers Service Commission Staffing Norms, revealed that, on average a secondary school teacher teaches 22 lessons a week or maintains 14.6 contact hours. This was lower than the 18 hours of teaching that secondary schools were expected to maintain (Republic of Kenya, 2005). The previous studies reviewed did not focus on effects of teacher recruitment and utilization policy on quality of secondary education in Kenya. Hence, the study sought to respond to the question "What are the effects of Teacher Recruitment and Utilization Policy on the Quality of Secondary School Education in Kenya?"

III.   Research Questions

The study sought to answer the following questions:
1. To what extent has the teacher recruitment and utilization policy been effectively implemented?
2. What are the main strengths and weaknesses of the teacher recruitment and utilization policy as far as quality of secondary education is concerned?
3. What are the attitudes, opinions and perceptions held on teacher recruitment and utilization policy in relation to quality education?
4. What effect has the teacher recruitment and utilization policy on quality of secondary education?
5. What are the main challenges experienced in the implementation of the teacher recruitment and utilization policy?
6. How can teacher recruitment and utilization policy be enhanced to improve the quality of secondary education?

IV.   Research Design and Methodology

This research used causal comparative design. Teachers and headteachers in Public Secondary Schools in Kenya, and TSC officials at the headquarters participated in the study. Two questionnaires, an interview guide and a document analysis guide were used in the study. These were questionnaire for teachers; questionnaire for headteachers; an interview guide for TSC officials; and a document analysis guide for Kenya National Examination Council KCSE reports.

The data collected were classified according to demographic variables, which included teacher staffing levels, students – teacher ratios, teachers' workload, teaching experience, performance in KCSE, and professional qualifications. The demographic variables were analyzed using frequencies and percentages. Tables and charts were used to demonstrate the distribution of the variables. To test the stated hypotheses, means, standard deviations, standard errors, t-test and one way analysis of variance (ANOVA) were used.

V.   Results and Discussion

A total of 180 questionnaires were distributed to teachers and headteachers in 30 secondary schools visited. Responses were received from 131 teachers and 28 headteachers a total of 159 questionnaires. The rest of the questionnaires were not returned. The overall return rate was 88 percent which was an excellent return rate of questionnaires. Four heads of divisions at Teachers Service Commission headquarters were interviewed, these included administration, staffing, quality assurance and standards and finance. The document analysis was done for 3 previous years' Kenya Certificate of Secondary Education (KCSE) examinations (2004, 2005 and 2006).

Table 2: The Distribution of Mean Scores, Standard Deviations and Standard Errors of Schools, Teachers Staffing Levels and Performance in KCSE

Level of teacher staffing	N	Mean score	Standard deviation	Standard error
Adequately Staffed	2	6.50	.707	.500
Overstaffed	1	4.00	.	.
Understaffed	21	5.67	2.082	.454
Total	**24**	**5.67**	**1.993**	**.407**

Schools which were adequately staffed had higher KCSE mean scores compared to those understaffed or overstaffed. The reason for this could have been that, the schools that were understaffed, some subjects could have gone untaught or taught by untrained teachers. On the other hand the over staffed school, teachers may become reluctant and hoping their colleagues were to cover the syllabus only to find out too late that it was not done.

Hypothesis One: The hypothesis intended to find out whether there was any significant relationship between secondary schools level of teachers staffing and students' performance in KCSE. The hypothesis stated that: - H_01: There is no significant relationship between the level of teachers' staffing of schools and the mean KCSE scores attained by students. The one way analysis of variance (ANOVA) results of the hypothesis are shown in Table 3.

Table 3: Analysis of Variance for Schools' Level of Teachers Staffing and Mean KCSE Scores Attained by Students

Source of Variation	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	4.167	2	2.083	.502	.612
Within Groups	87.167	21	4.151		
Total	**91.333**	**23**			

From the data in Table 3, the observed value of F was 0.502 and p value was 0.612. The p value was greater than p = 0.05, hence the null hypothesis was not rejected. It was concluded that there was no sufficient reason to believe that there was any significant relationship between secondary schools' teachers' staffing level and their students' performance in KCSE.

Table 4: Distribution of the Schools by Average Number of Periods Taught by Teachers per Week

Average Number of Periods Taught by Teachers per Week	Frequency	Percent
16-18	2	7.4
28 & above	6	22.2
25-27	9	33.3
19-24	10	37.0
Total	**27**	**100.0**

The schools had diverse teaching loads; this sets an artificial ground for diverse performance in schools given the students' potentials and other schools' endowments. This should not be the case.

Table 5: The Distribution of Mean Scores, Standard Deviations and Standard Errors of Schools' KCSE Performance and Schools Teachers' Teaching Workload

Workload	n	Mean score	Standard deviation	Standard error
16-18	1	4.00	.	.
19-24	9	6.11	2.472	.824
25-27	9	5.22	1.394	.465
28 & above	4	5.25	1.708	.854
Total	**23**	**5.52**	**1.904**	**.397**

The schools with average teacher teaching load of 19 – 24 lessons per week had the highest average KCSE mean score, compared to those with lower or higher average teacher's teaching workload. This could have meant that with this workload the teachers were neither underutilized nor over utilized. Hence, they could give their best, leading to high performance in KCSE examination.

Hypothesis Two: This investigated whether there was any significant relationship between secondary schools teachers' teaching workload and students' performance in KCSE. The hypothesis state that: - H_02: There is no significant relationship between secondary school teachers' number of teaching periods per week (teaching workload) and the mean KCSE scores attained by students. The one way analysis of variance results of the hypothesis are shown in Table 6.

Table 6: Analysis of Variance for Schools' Teachers Teaching Workload and Mean KCSE Scores Attained by Students

Source of Variation	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	6.545	3	2.182	.566	.644
Within Groups	73.194	19	3.852		
Total	**79.739**	**22**			

The data in Table 6 indicated that the observed value of F was 0.566 and p value was 0.644. The p value was greater than p = 0.05, hence the null hypothesis was not rejected. It was concluded that, the teaching workload did not influence the students' performance in KCSE.

The schools were different in the number of students in each school over the years. The average number of students in the schools in 2000 was 342; while in 2004 it was 380.43. In 2005, the average number of students went up to 412.28, this was 8.4 percent increase. In 2006 the average number of student was 455.13 per school (10.4 percent increase from the previous year). The increment index was 1.24. On the other hand the average number of teachers in schools in 2000 was 18.53; then in 2004 it was 18.10. In 2005 the average number of teachers per school went up to 18.95 this was 4.7 percent increase. In 2006 the average number of teachers per school was 19.70 this was 4.0 percent increase from the previous year. The increment index was 0.85.

From 2000 to 2006, the students had increased by 33.1 percent. This means there has been improved access to secondary education. This was in agreement with what had been established in the literature review that between 2005 and 2006, the number of public secondary schools had increased by 1.9 percent; while the student number had increased by 10.3 percent (Republic of Kenya, 2006). For the enrolment to be maintained and ensure quality education is provided in schools, the increase in students must be matched with equal proportion in number of teacher increment. Otherwise low quality education may be provided. Eventually, it may affect the student enrolment, by dropping out of school upon realizing they are not gaining much due to lack of teachers.

Although there was increase in the number of teachers, it was not in the same pace with increase in students. In 2006 there was a of drop in number teachers especially in Provincial and district schools and being

the majority any change in them did affect the whole system. This was in agreement with the Ministry of Education Science and Technology records that indicated, in 2006 the number of secondary school teachers dropped by -2.8 percent (Republic of Kenya, 2006). The drop could have been caused by lack of funds having had the country conduct the referendum (in 2005) on constitution draft which used a lot of money. An effort should be made to ensure that adequate number of teachers is provident so as to sustain high quality education in schools.

In 2000 the average number of schools' KCSE candidates was 90.20; and in 2004 it was 88.32. In 2005 the average number of schools' KCSE candidates went up to 93.04 this was 5.34 percent increase. In 2006 the average number of schools KCSE candidates was 90.83 this was -2.38 percent drop from the previous year. The increment index was -0.45.

The drop in number of KCSE candidates could have been occasioned by reduced number of teachers in schools in the same year as reported earlier (Republic of Kenya, 2006). This could have made some potential candidate opt not do examination in subjects where there were no teachers, consequently reduced number of candidates. It is necessary to ensure adequate number of teachers, is available in all schools. This will not only guarantee high quality education, but also maintain and increase student enrolment.

Table 7: Distribution of Teachers by Training in their teaching Subjects

Teacher teaching subjects not trained in	Frequency	Percent
Yes	23	17.6
No	108	82.4
Total	**131**	**100.0**

Demonstrates the situation where a teacher trained to teach a given subject teaches a different subject in school. Teaching a subject that one is not trained in could have compromised the quality of education. This means the TSC has not been able to supply all schools with adequate number of teachers. Efforts should be made to ensure all schools have adequate number of teachers.

Table 8: Distribution of Schools by Subject(s) Taught by Untrained Teacher(s)

Schools with subjects taught by untrained teachers	Frequency	Percent
Yes	13	46.4
No	15	53.6
Total	**28**	**100.0**

This confirmed further that the quality of education was compromised by use of untrained teachers. The teacher recruitment and utilization policy has not supplied each school with adequate number of trained teachers in all subjects.

Table 9: Distribution of Teachers by Subjects Not Trained In

Teachers' subjects not trained in	Frequency
Kiswahili	1
Physics	1
Business Studies - Accounting section	1
Christian Religious Education	1
Biology	1
Mathematics	2
Agriculture	2
Geography	2
History and Government	2
Business Studies	3
Physical Education	4
Total	**20**

When subjects are taught by untrained teacher, quality of education is undermined. Quality education does not only concern with passing of examination; but it also includes the methodology of instruction delivery. This is because the student can recite subject content and pass examination, but this kind of education with no internalization is of low quality.

Table 10: Distribution of schools by Subjects Taught by Teachers not trained in

Subject	Frequency
Kiswahili	1
Geography, Physics, Chemistry & Business Studies	1
Chemistry, Physical Education & Life Skills	1
Physics, Kiswahili, Agriculture & History	1
Islamic Religious Education	1
History, IRE, Mathematics, Business Studies & Chemistry	1
Christian Religious Education, English & Business Studies	1
Chemistry, Biology, Mathematics & Agriculture	1

CRE, IRE, Home Science & French	1
Agriculture	2
Agriculture, Business Studies & Physics	2
Total	**13**

This to a large extent can compromise the quality of education in school. This confirmed further the existence of untrained teachers in schools; as reported earlier on existence of untrained teachers in schools. This undermines quality of education.

Table 11: The Distribution of Mean Scores, Standard Deviations and Standard Errors of Schools' KCSE Performance and the Existence of Teachers Teaching Subject Not Trained In

Schools with teachers teaching subjects not trained in	n	Mean Score	Standard deviation	Standard error
Yes	10	4.90	1.524	.482
No	14	6.21	2.155	.576
Total	**24**	**5.67**	**1.993**	**.407**

The implication for this could have been that either untrained teachers lacked subject matter mastery or lacked the appropriate pedagogical methods for their teaching subjects. Hence, the lower performance in schools with teachers teaching subjects not trained in.

Hypothesis Three: The hypothesis sought to establish whether there was any significant difference in mean KCSE score of students when classified by: (a) Those taught by teachers who were subject specialist; and (b) Those who were taught by teachers who were none subject specialist. The hypothesis stated that: - H_03: There is no significant relationship between teachers' specialization in the teaching subjects and the mean KCSE scores attained by students. The t-test results of the hypothesis are shown in Table 12.

Table 12: T-Test of Schools' Mean KCSE Scores Attained by Students and their Teaching Staff Professional Training

t	Df	Sig.
-10.605	**23**	**.000**

The data in Table 12 revealed that, the calculated t value was -10.605. The degree of freedom was 23. The p value was 0.000. At 0.05, level of significance the null hypothesis was rejected. Since the p value 0.000 was less than p = 0.05. It was concluded that there is significant difference in mean KCSE score of students when classified by: (a) Those taught by teachers who were subject specialist; and (b) Those taught by teachers who were none subject specialist.

The schools KCSE mean score (in points) in 2000 was 5.20; while in 2004 it was 5.55. In 2005 the schools' KCSE mean score went down to 5.48, this was -1.26 percent drop. In 2006 the schools KCSE mean score was 5.67, this was 3.46 percent increase from the previous year. The increment index was 0.64. This shows that there has been almost constant performance in KCSE especially in 2004, 2005, and 2006. For 2000, the KCSE performance was lower compared to later years (2004, 2005 and 2006) when the current policy was implemented. This could have implied that the current policy improved quality of education in secondary schools.

Table 13: The Distribution of Mean Scores, Standard Deviations and Standard Errors of Schools' KCSE Performance Before and After the Implementation of the current Teachers Recruitment and Utilization Policy

Year of KCSE examination	n	Mean score	Standard deviation	Standard error
2000	20	5.20	2.308	.516
2006	24	5.67	1.993	.407

The reason for improved performance could have been that, the implementation of the current teacher recruitment and utilization policy positively affected the quality of teaching in schools.

Hypothesis Four: The hypothesis was to determine any significant difference in KCSE performance comparing schools before and after the implementation of the current teacher recruitment and utilization policy. The hypothesis predicted that: - H_04: There is no significant relationship between the implementation of the current teacher recruitment and utilization policy and the mean KCSE scores attained by students.

Table 14: T- Test of Schools' Mean KCSE Scores Attained by Students before and after the Implementation of the Current Teacher Recruitment and Utilization Policy

t	df	Sig.
10.076	19	.000

The data in Table 14 indicated that p value was 0.000. The p value was less than the p = 0.05. Hence, the null hypothesis was rejected. It was concluded that, there was a significant difference in KCSE performance

comparing before and after implementation of the current teacher recruitment and utilization policy. This could have been due to deliberate effort towards improving the quality of education in schools, especially through replacing the teachers who leave the teaching profession. The stability in schools where there is minimal transfers may have boosted the performance of schools.

The KCSE national mean score (in marks) in 2004 was 47. In 2005 the KCSE national mean score went up to 49, this was 4.26 percent increase. In 2006 the KCSE national mean score was 47 this was -4.08 percent drop from the previous year. The increment index was -0.04. The drop in KCSE performance in 2006 could have resulted from the drop in the numbers of secondary school teachers in that year (2006) as reported earlier (Republic of Kenya, 2006).

The average number of students who attained C+ and above grade in KCSE per school in 2000 was 35.50; and in 2004 was 46.86. In 2005 the average number of students per school who attained grade C+ and above in KCSE went down to 41.26, this was -11.95 percent drop. In 2006 the average number of schools candidates who attained C+ and above grade in KCSE was 46.86; this was 13.57 percent increase from the previous year. The increment index was 0.12.

Table 15: KCSE Candidates and Their Performance 2004-2006

Year	KCSE number of candidates	Number of candidates attained C+ & above grades	Percentage of candidates attained C+ & above grades
2004	222676	58239	26%
2005	260665	68030	26%
2006	243453	63102	26%

The data in Table 15 on KCSE candidates and their performance revealed that the increase in number of candidates led to increase in number of candidates getting quality grades, that is C+ and above. The reverse is true that is the decrease in number of candidates led to decrease in number of candidates who got quality grades that is C+ and above. However, the change in number of candidates did not affect the percentage of students who attained C+ and above grades. This was evidenced where in three consecutive years that is 2004, 2005 and 2006, although the number of candidates varied, the percentage which attained C+ and above grade remained 26 percent. This means that to produce more students in secondary schools who have the minimum entry qualification for university education, there should be more candidates for KCSE with adequate number of teachers. The lack of teachers may lead to less candidates registering for KCSE, as was seen earlier, where there was reduced number of teachers and at the same time reduced number of KCSE candidates. This may result from the students unwilling to register for examinations where there are no teachers.

VI. Conclusions

On the effects of the policy on quality of education, it was established that the policy did not guarantee high quality education in secondary schools. This was evidenced through the reported imbalance in staffing levels in schools; where some schools were understaffed while others were adequately staffed or overstaffed. The quality of education was further compromised where untrained teachers were engaged in teaching. After testing the null hypothesis it was found that there was a significant difference in KCSE mean scores of students when classified by those taught by specialist and those taught by non-specialist. This was in agreement with what Eshiwani (1983) found, that is untrained teachers contributed to low examination grades. This calls for redress on teacher recruitment and utilization policy.

VII. Recommendations

The Government and Teachers Service Commission should consider revising the teacher recruitment and utilization policy, to ensure that all secondary schools are adequately staffed with qualified teachers throughout the year. This may include having a data bank of teachers who could be used to fill teaching vacancies as they arise. As well it may involve facilitating school Board of Governors financially to engage qualified teachers on temporary basis to handle short-term shortages. Also teachers with low workload may be motivated and facilitated financially to teach in more than one school.

The Teacher Service Commission should consider revising the teacher staffing norm, where teachers in secondary schools will be posted to teach only one subject to eliminate the intricacy of subject combination. This may make it easy to plan for the required number of teachers per subject based on the teaching time allocated per subject. At the same time it may be easy to establish the teachers who may be deployed to teach in more than one school, depending on their workload. This may be in case where a teacher may have less workload than the recommended minimum.

The Teachers Service Commission should ensure that there is balanced distribution of teachers in schools. That is ensuring that there is no school which is either understaffed or overstaffed. This can be achieved through either moving teachers from overstaffed schools to understaffed schools or facilitating utilization of the services of teachers with low work load. This will provide equal chance to all schools to offer quality education.

The Teachers Service Commission should consider revising the minimum and maximum teaching load without straining the teacher or under utilizing the teacher. For instance, in this study it was found that teachers teaching between 19 -24 lessons per week, produced the best results in KCSE examination. This can be the basis for establishing the best average work load for teachers in secondary schools.

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