



QUALITY PRIMARY EDUCATION IN KENYA: IMPLICATIONS OF TEACHERS' CHARACTERISTICS

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Abstract:

This paper provides a critical appraisal of influence of teachers' characteristics on learning achievement in primary schools in Kenya. The main objective of the study is to analyze the influence of teachers' characteristics on quality education in primary schools. The paper examined the role played by pedagogy in influencing learning achievement. The paper also assessed the role played staff development in promotion of quality primary education. The paper further investigated the influence of class size in promotion of quality primary education. Particular attention is given to the crises in inputs and processes that affect the output of quality primary education. This study uses the systems theory. Systems theory was advanced by Ludwig von Bertalanffy (1968). He emphasized that systems are open and interact with their environments to acquire qualitatively properties. Systems theory focuses on the arrangement of relations between the parts which connect them into a whole. It further provides an analysis of an organization. It recognized the influence of personnel in an environment on organizational structure and function. It focuses on environment and how changes can impact on the organizations. The study analyzed challenges that arise due to upsurge of enrolment in primary schools and how they affect quality education in primary schools in Kenya. Particular attention is given to the crises in inputs and processes that affect the output of quality primary education. These crises are reflected in class size, teacher establishment and physical resources that influence quality education. The paper adopted document analysis method. This is drawn from international and local legal instruments on quantitative and qualitative education. Local analysis of the basic

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education policies and the legal framework in Kenya was conducted. Studies conducted in Kenya on quantity and quality primary education was examined. The study further adopted mixed method approach. Both quantitative and qualitative approaches to research were used. Descriptive survey design was used to collect data from one set of questionnaires. The target population comprised of head teachers and teachers in primary schools. Using the sampling guide developed by Krejcie and Morgan (1970), a sample size of 36 head teachers and 144 teachers was selected. The total sample size for the study was 180. This conformed to the confidence Interval of 0.05, confidence level of 95 percent which is a Z-score of 1.96 and standard of deviation of 0.5. The reliability was estimated through use of Cranach's Alpha Coefficient using Statistical Package for Social Sciences (SPSS) version 19.0. Findings of the study are significant to Kenya in particular and sub Saharan Africa in general, as they would assist to redress challenges of quality education arising from learners characteristics. The findings might help the policy formulators formulate education policies and the legal framework which are skewed towards teachers' characteristics. The policy implementers would understand and appreciate education policies within which they are supposed to operate in providing effective pedagogical and teacher development practices in the implementation of quality education at primary level. The study is significant to the field of comparative and International education, since it provides data on what the Kenyan government is doing in promoting the development of quantitative and qualitative primary education. The entire education stakeholders would understand how to redress quality issues which arise due to teachers' characteristics. This study is significant to the field of comparative and International education, since it provides data on how teachers' characteristics influence quality education in primary schools in Kenya.

Keywords: class size, pedagogical practices, primary education, teachers' characteristics, learning achievement

1. Objectives of the study:

- i) Investigate the influence of class size on promotion of quality education in primary schools in Kenya.
- ii) Assess the role played by staff development in the influence of quality education in primary schools in Kenya.
- iii) Assess the role played by pedagogical practices in implementation of quality education in primary schools in Kenya.

Hypothesis H₀: Teachers' characteristics do not significantly influence quality education in primary schools.

1.1 Introduction

The Kenya government committed itself to international protocols on expansion of education and promotion of quality education. The instruments signed included 1990 (Jomtien) and 2000 (Dakar) declarations on Education for All (EFA), and Millennium Development Goals (MDGs) to achieve Universal Primary Education (UPE). She had to develop policies on UPE in order to attain global target for EFA. Kenya began campaign for universal primary education (UPE) after 1963. In 1974, Kenya introduced FPE from class 1 to class 4. By 1982, the primary enrollment had grown to 4,184,602 pupils. In 2003, Kenya reintroduced FPE. Consequently, there was an increase of pupil enrollment from 6,131,000 in 2002 to 7,208,100 in 2003 (G.O.K 2004).

While FPE has succeeded in increasing quantity of children enrolled in primary schools, there is concern over quality of primary school education being offered. High enrolment has put pressure on existing resources responsible for quality education. In light of this, classes are over enrolled. The issue of quality in democratized education is crucial. UNESCO (1993) identifies the following factors as indicators of quality education; the percentage of trained teachers in schools and their professional commitment; availability of good instructional materials and capacity of pupils and teachers to use these materials; and the extent to which general school environment is conducive for learning. The inputs contribute to efficiency in education. Efficiency is associated with learner's cognitive achievement which is measured through examinations. It emphasizes on maximizing inputs in order to produce optimum goods or services. This study focused on processes, and outputs as important dimensions of educational quality. Kenya Education Sector Support Program (KESSP) established National Assessment Centre (NAC) to monitor learning achievement. In 2010, NAC released the results of its first assessment report. The report revealed that among other issues: literacy levels are lower in public schools than in private schools, most children cannot solve mathematical problems in an abstract pencil and paper format. This was as a result of high enrolment in public schools due to introduction of F.P.E. The number of teachers deployed in primary schools could not merge the pupils' enrolment.

1.2 Quality Teaching

Teaching methods link to conception of what the essence of teaching is. Quality as a process can be understood as teaching methods that encourage student centered learning (UNICEF, 2000). Good teachers produce memorable educational experiences.

Study conducted by KNEC (2010) reveal that 37.8% of teachers had not attended in-service courses since 2003. In-service courses equips teachers with new teaching skills. Quality teaching is also affected by teacher: pupil ratios. Staffing of teachers in primary schools is an area of concern. Currently there is acute shortage of teachers. Poor staffing has affected attainment of UPE in Kenya. There is a conflict to the extent of teacher's shortage. TSC estimates at 45000 while K.N.U.T puts the estimate at 60000 teachers (Kimani, 2008). UNICEF estimates a pit fall of 31000 teachers (UNICEF, 2008)

Uwezo (2011) noted that there is severe shortage of teachers, estimated at 4 teachers per school. The report further revealed that there was minimal attainment of literacy and numeracy skills. In practice, the evidence of opportunity to learn as surveyed by U.N.E.S.C.O, N.A.C, and UWEZO reveal that many children accessed primary education as a result of democratization of education. However, the aspects of non adjustive change have diluted quality of primary school education. Poor outcomes of learning are therefore indicators driven by pressure from inputs. These surveys were only concerned with the quantity of teaching force. The issue of quality was not addressed in the studies. This study bridged the gap by investigating the influence of teachers' characteristics on quality primary school education.

1.3 Importance keeping professional records

Record keeping generally relate to administrative activities that contribute to cost-effectiveness and efficiency in school business administration (UNESCO, 2005). Thus, it is necessary to maintain records for that for effective educational administration. This is because proper record keeping facilitates in retrieval of information when the owner of the record is not available. Ololube (2013), notes that good record keeping translates to long term benefits of achieving educational objectives. Professional record keeping is therefore vital. In light of this, in education system it plays a fundamental role in collection and provision of efficient information. Professional records are a means to accountability. Besides, they provide proof to the activities undertaken by teachers. Records such as schemes of work, lesson plans and learners' progress records ensure accountability of the teaching profession. These records also help school administrators to ascertain the effectiveness of the teaching process. They are also used as references when parents discuss students' performance. The records are crucial as they assist in tracking students' progress. Professional records also serve as an information bank from where references can be made when information is needed.

1.4 Class size

Quality teaching is affected by teacher: pupil ratios. A survey conducted by UNICEF/UNESCO in 1995 in 14 least developed countries found that Class sizes ranged from fewer than 30 students in rural and urban Bhutan, Madagascar, and the Maldives, to 73 in rural Nepal and 118 in Equatorial Guinea (Postlewaithe, 1998). Studies on whether larger class sizes hurt the quality of education have been conducted. Educators and researchers from diverse philosophical perspectives have debated the relationship between class size and student learning at length. There is consensus among many scholars that smaller classes allow better quality of teaching and learning (Anderman, 2009). Finn et al. (2003) concur with these views that students in small classes in the elementary grades are more engaged in learning behaviors and they display less disruptive behavior than students in larger classes do. However, findings of studies conducted on large class size in lower classes are contrary. Westerlund (2008) advances that increase in class size of mathematics leads to lower student course evaluations.

Subsequently in large class size, teachers use lecture method when teaching while in small class size instructional methods that encourage learners' participation are used. Through learners' participation, students benefit from professionally recommended pedagogies. These findings are consistent with those studies by McKeachie (1980) that revealed a positive association between small class size and the development of higher-level thinking skills. In spite of this, students in smaller classes not only get higher teaching quality, but their rapport with teachers is better than that of i large classes. Staffing of teachers in Kenyan primary schools is an area of concern. The findings of Ackers and Hardman (2001) pointed out that a teacher in Kenyan primary school handles up to 80 students at a time in a regular sized classroom. In spite of this, attainment of literacy and numeracy skills in pupils is not realized.

1.5 Pedagogical approaches by teachers

Studies by Various researchers (Chang, 2010; Snehi, N., 2011) on pedagogical approaches indicate that instructional methods used by teachers contribute to learning achievement. Pedagogical approaches used by teachers are grouped into teacher-centered and learner-centered. Teachers centered approaches are used at the expense of learners. With teacher centered approaches, teachers are not actively involved in the teaching / learning process. These methods do not contribute to learning achievement of learners. The methods are used by teachers when they are not prepared to teach. Teachers mainly use teacher centered approaches in order to ease their work. Teachers' beliefs and preferences in use of these methods is in relation to over enrollment in

classes that lead to over strained facilities in schools or for the purpose of excelling in national examinations.

Teacher centered approaches are inappropriate approaches and subsequently don't facilitate learning. Studies conducted by Tella, et al., (2010) noted that teacher-centered approaches lead to cramming and rote learning by pupils. These approaches contribute to memorization and reproduction of information. The teacher centered approaches fall short of knowledge and don't tackle contemporary problems. These methods are classified by researchers as the traditional pedagogical approaches. The teacher dominates the teaching-learning process. Teachers are totally involved in the classroom activities through explanations and discussions. Learners only participate in the learning process when only called upon to answer questions. These approaches cause psychological torture to learners. The approaches contribute to mismatch of teaching approach and the learning process. They are responsible for lose interest in learning by the pupils. They also contribute to high dropout rate schools. They can also contribute to indiscipline among learners.

Learner centered approaches are appropriate approaches. They facilitate effective learning and don't constrain the learning process. These instructional approaches which fall under learner-centered approaches contribute to learning achievement of students. Studies conducted by Dufresne, et al., (2010) indicate that learner-centered approaches develop creative skills, participation and subsequently learning achievement). These approaches are most effective instructional methods in promoting learning achievement. It is, therefore, important for teachers to lean on instructional approaches that influence learning achievement. It is against this background that this study interrogated the imperative of quality in relation to teachers' characteristics in Kenya.

1.6 In service courses

Teacher development is essential in promotion of quality education. Teacher education, both pre-service and in-service, help teachers develop teaching methods and skills that take new understandings of how children learn into account. Just as curriculum should be child-centred and relevant, so should instructional methods. The traditional view of teaching as presentation of knowledge no longer fits with current understandings of how and what students learn. Teaching methods should facilitate active student learning rather than promote passivity and rote memorization.

Professional development can help overcome shortcomings that may have been part of teachers' pre-service education and keep teachers abreast of new knowledge and practices in the field. This ongoing training for teachers can have a direct impact on student achievement. Case studies from Bangladesh, Botswana, Guatemala, Namibia

and Pakistan have provided evidence that ongoing professional development, especially in the early years after initial preparation and then continuing throughout a career; contribute significantly to student learning and retention (Craig, Kraft & du Plessis, 1998). Effective professional development may take many forms; it should not be limited to formal off-site kinds of programmes. Dialogue and reflections with colleagues, peer and supervisor observations and keeping journals are all effective ways for teachers to advance their knowledge (UNICEF, 2000).

Teachers attend in-service courses in order to improve on their teaching techniques. In service courses equip teachers with new teaching skills. Study conducted by Anderson (2000) in Kenya on professional development showed that teachers supported with in-service as well as external workshop training improved significantly in their abilities to use child-centred teaching and learning behaviours. However, a study conducted by KNEC (2010) revealed that 37.8% of teachers had not attended in-service courses since 2003. This revelation implies that most teachers lack the necessary current pedagogical approaches to teaching. In light of this, GOK & UNESCO (2005) recommend that teachers should be taken through in-service courses to train them on new teaching techniques like multi-grade and double-shift and ways of instilling discipline without using the cane and on guidance and counseling, especially to enable them deal with over-age learners Parents, school communities and involvement of sponsors in disciplining of pupils.

2. Statement of the problem

From the background information, it is evident that Kenya domesticated international protocols in order to realize EFA and MDGs goals. Kenya had to re-introduce FPE in January 2003. This was to make primary education accessible to all children irrespective of their social classes. The primary education to be offered is to be qualitative. However, sudden influx of pupil population has had far-reaching implications in terms of existing physical facilities and human resources. These implications have challenged the quality of education being offered to all citizens. The Education policy formulated is to promote quality education as expected by citizens and promote these aspirations. Teachers, as policy implementers eventually translate the rules and regulations into actual classroom practice on a day-to-day basis. Nevertheless, this appears elusive as evidenced by low academic performance by learners. This scenario has been due to conservative elements in people's mental states, which makes it difficult for teachers and other stakeholders to adapt and face challenges that arise because of quality education. This study, therefore, investigated whether issues of quality education in primary schools in Kenya is a reality

or an assumption. The variables investigated included school physical infrastructure, human resource and instructional materials. These variables are considered crucial for pupils to participate reasonably in learning activities in the classrooms.

3. Significance of the study

The study might be significant to the government of Kenya and sub Saharan countries, as the findings would be used by education planners on how to incorporate available inputs into education to achieve quality education in public primary schools. Policy planners would use measures identified in formulation of policy on provision, improvement and efficiency of primary education. Using the findings on quality education in primary schools, roadmaps would be designed for continuous improvement of quality education. When educators understand the aspect of continuous improvement, they will gain confidence to shape and alter the nature of their schools.

Findings from this study may also provide suggestions for quality assurance to be shared with people involved in the study and the public at large. The study findings are likely to draw attention of stake holders to focus on the needy areas in respect to implementation of quality education in primary schools. Quality Assurance and Standards Officers (QASOs) may use the information on supervision of schools. The results too, are likely to assist teachers to deal with their weaknesses including redressing them.

Finally, findings of the study will further add to growth of knowledge on quantity and quality education in primary schools. This study may add to the existing research findings and literature on quality education in primary schools. In addition, it might help future researchers while identifying priority area in which to carry out more research. The findings may therefore be of interest to researchers in educational policy studies; and comparative and International education since it provides data on what the Kenyan government is doing in promoting the development of quantitative and qualitative primary education.

4. Theoretical framework

This study used the systems theory. Systems theory was advanced by Ludwig von Bertalanffy (1968). He emphasized that systems are open and interact with their environments to acquire qualitatively properties. Systems theory focuses on the arrangement of relations between the parts which connect them into a whole. It further

provides an analysis of an organization. It recognized the influence of personnel in an environment on organizational structure and function. It focuses on environment and how changes can impact on the organizations. It also explains the interdependence that is reflected in the organizational behavior. Systems theory is therefore an Input Process Output model. This study therefore used this theory as schools are organizations with various parts that are open and interact in order to acquire qualitative properties. A qualitative property to be acquired is implementation of quality education in primary schools. This is the process in this model. Inputs (class size, physical facilities instructional materials and human resource led to implementation of quality education in primary schools. These are the independent variables of the study. The outputs which culminate into outcomes of quality education are realized in quality indicators. These indicators include literacy skill numeracy skills, life skills values and attitudes.

5. Research Methodology

The study targeted primary school head teachers and teachers in Kakamega County. Kakamega County was targeted because it is one of the largest sub counties in Kenya. It is a cosmopolitan county and has characteristics that cut across the country. Hence, the findings were generalized. Using the sampling guide developed by Krejcie and Morgan (1970), a sample size of 36 head teachers and 144 teachers randomly selected from the 36 sampled primary schools. The sample size for head teachers and teachers totaled to 180. It conformed to the confidence Interval of 0.05, confidence level of 95 percent which is a Z-score of 1.96 and standard of deviation of 0.5. The study objectives led to the collection of partly quantitative and qualitative data. In this case, quantitative data, attitudes, and opinions of respondents were analyzed and generalized in order to derive descriptive statistics. Findings were depicted using tables and graphs. Regression analysis was used to determine the relationship between independent variables of teachers' characteristics and the dependent variable of quality education.

5.1 Research instruments

The research study used two sets of questionnaires to collect data. The two sets of questionnaires were administered to head teachers and teachers. The questionnaire had open and close ended items. The close ended items contained Likert scale method of summated ratings. This enabled the respondents to indicate their degrees of agreement and disagreement in relation to the influence of teachers' characteristics on quality education.

5.2 Data analysis

The study used two sets of questionnaires that were filled by head teachers and teachers. The data obtained was edited, coded and entered in computer using statistical package for social science (SPSS) software. The data was quantitatively and qualitatively analyzed. Cranach's Alpha Coefficient of 0.6 was used to determine the reliability of the study. Descriptive statistics such as percentage and frequency were used for quantitative narration. Conclusion was drawn basing on the findings of the study.

6. Results and Discussions

The purpose of this study was to determine the influence of teachers' characteristics on quality education in primary schools. In light of this UNESCO (2005) notes that outcomes of quality education in the learning process are expressed in teaching and learning process. In spite of this, primary data was collected from 36 head teachers and 144 teachers from primary schools in Kakamega County. The study therefore had to seek information on teachers' characteristics in primary schools by rating the teaching processes. Head teachers were asked to respond on adequacy teachers in their schools. Their responses are presented in tables 6.1 below:

Table 6.1: Adequacy of teaching staff

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Adequate	34	94	94	94
	Inadequate	2	6	6	100
	Total	36	100.0	100.0	

From table 6.1, respondents indicated that 6 percent of schools have got adequate number of teachers. Respondents further indicated that 94 percent of schools had inadequate teachers. This implies that schools had acute shortage of teachers. On overall most primary schools in are understaffed. The findings are in concurrence with Uwezo's (2011) findings which revealed that there is severe shortage of teachers in primary schools in Kenya. This implies that quality education in primary schools is compromised due to understaffing of teachers.

The study further sought to establish the extent to which teachers keep their professional records. Professional records are crucial in appraising teachers on their work. They also assist in tracking learners' progress. The study therefore sought information on maintenance of professional records. The findings are presented in table 6.2, below:

Table 6.2: Maintenance of professional records

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Poor	140	78	78	78
	Fair	40	22	22	100
	Good	0	0	0	100.0
	Excellent	0	0		100.0
	Total	180	100.0	100.0	

From table 6.2, 78 percent of the respondents poorly maintained their professional records. 22 percent fairly maintained their professional records. On overall, most teachers don't maintain their professional records. This is an indication that records are poorly maintained by teachers. This practice is likely to impact negatively on implementation of quality education. This is as a result of under staffing of teachers in schools.

The study also sought to find out the extent to which teachers check pupils' exercise pupils. Learning being a process is a relatively permanent change that occurs as a result of reinforced practice. Checking of learner' work reinforces the learning process as it motives learners through appreciation of work done. The teachers' views were surveyed in order to determine the extent to which learners' exercise books are checked. Their responses are contained in table 6.3 below;

Table 6.3: Checking pupils exercise books

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Poor	9	6.4	6.4	6.4
	Fair	28	20.0	20.0	26.4
	Good	19	13.6	13.6	40.0
	Excellent	84	60.0	60.0	100.0
	Total	140	100.0	100.0	

From table 6.3, 6.4 percent of the respondents indicated that checking of pupils' exercise books was poor. 20 percent fairly checked learners' exercise books. 13.6 percent of the respondents further indicated that checking of pupils' exercise books was good. Another 84 percent of the respondents also indicated that checking of pupils' exercise books was excellent. On overall, most teachers check learners' exercise books. This is an indication that the learning process will be reinforced. This practice is likely to promote learning achievement of learners. Hence, quality education is likely to be realized.

The study further sought information on teaching approaches used by teachers during classroom teaching. Pedagogical approaches as a process play crucial role in implementation of quality education. Head teachers and teachers were therefore asked

to respond to the approaches used by teachers. Their responses are presented in the table 6.4 below:

Table 6.4: Teaching approaches

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Teacher centered	160	87	87	87
	Learner centered	20	13	13	100
	Total	180	100.0	100.0	

From the findings in the above table, 87 percent, of the respondents indicated that teacher centered methods were used by teachers. 13 percent of the respondents indicated that learner centered methods were used by teachers. On overall most teachers use teacher centered methods. This is an indication teachers use traditional methods of teaching. Mackatiani (2017) notes that teacher centered approaches enslave learners through provision of knowledge by use of teacher centered approaches. They therefore deny learners a chance to participate in the learning activities.

Table 6.5: Level of in service courses

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	School	160	87	87	87
	Division	20	13	13	100
	Sub county	0	0	0	100
	Total	140	100.0	100.0	

From the findings in table 6.5, 87 percent, of the respondents indicated that they had attended in-service course at school level. 13 percent of the respondents indicated that of the respondents indicated that they had attended in-service courses on divisional level. There was no respondent who had attended in service course on sub county level. This concurs with KNEC (2010) findings on in-service course attendance. On overall in service courses are hardly organized by Quality Assurance Officers. This has had negative impact on quality education as teachers don't get appraised on current approaches to teaching. This is due to acute shortage of Quality Assurance Officers.

6.1 Testing hypothesis of the study

The study hypothesis was H_0 : teachers' characteristics do not significantly influence quality education in primary schools. In order to determine influence of teachers' characteristics on quality education in primary schools regression analysis was done. Results of the analysis were as indicated in table 6.6 below:

Table 6.6: Influence of teachers' characteristics

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics				Durbin-Watson	
					R Square Change	F Change	df1	df2		Sig. F Change
1	.683 ^a	.466	.253	.412	.466	2.184	6	29	.103	2.314

a. Predictors: (Constant), maintenance of professional records, use of learner centered approaches, in service courses, maintenance of professional records, use of learning aids and checking pupils' exercise books

b. Dependent Variable: quality education

The results from table 6.6 revealed that there was significant relationship between the influence of teachers' characteristics and quality education in primary schools. This was supported by the Durbin-Watson (DW) statistical test. In DW statistical test, the values 0-2 reflect positive auto correlation while 2-4 indicate negative autocorrelation. The DW for the hypothesis: $H_0: \rho > 0$. $P=2.314$. This, therefore indicated negative autocorrelation. The null hypothesis is therefore rejected. However, the findings further indicated that adjusted $R^2=25.3$ percent. This implies that teachers' characteristics predict quality education primary schools by 25.3. percent. The variables in the study subsequently predicted quality education in primary schools. The analysis of variance (ANOVA) was also done and is represented in the table 6.7 below:

Table 6.7: ANOVA

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	2.225	6	.371	2.184	.103 ^a
	Residual	2.547	29	.170		
	Total	4.773	35			

From table 6.7 above, F value is 2.184 with a Sig. (p) value of .103. Since the Sig. value .103 is greater than alpha of .05, $p > .05$. It is not significant at $p < .05$. This indicated that there was no significant difference between the variances of teachers' characteristics. All variables combined therefore predicted the quality of education in primary schools.

7. Conclusions

From the study findings, it can be concluded that:

- i) There is acute shortage of teachers which has led to negative impact of quality primary education.
- ii) Inefficiency in primary schools is associated with understaffing of teachers as it impedes the effective teaching learning process.

- iii) Most teachers don't maintain their professional records.
- iv) Most teachers use teacher centered methods.
- v) Teachers' characteristics predict quality education in primary schools by 11.0 percent.
- vi) There is acute shortage of education officers which has negatively affected organization of in service courses

8. Recommendations

- i) The government should actualize her obligation on supply of adequate teachers in primary schools.
- ii) Proper structures should be put in place to redress the issue of record keeping for the purpose of improving the quality of primary education.
- iii) Teachers should be regularly abreast on professional approaches to be used during classroom teaching
- iv) The government should come up with clear policy to redress inefficiency in primary schools.
- v) The government should deploy adequate Education officers to actualize in service courses for teachers.

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