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School Infrastructure Policy Interpretation: Consistencies and Variations among Headteachers and District Education Officers

Stephen J. Kamau[1*], Charles M. Rambo (PhD)[2], John Mbugua (PhD)[3]

[1]School of Business and Economics, Kirinyaga University. P.O. Box 15062-00100, Kenya (Corresponding Author)

[2]School of Open and Distance Learning, University of Nairobi, P.O. Box 30197-00100, Nairobi, Kenya.

[3]School of Open and Distance Learning, University of Nairobi, P.O. Box 30197-00100, Nairobi, Kenya.

Abstract: ***The study sought to demystify the consistencies and variances in school infrastructure policy interpretation. A cross-sectional survey, guided by pragmatism and using mixed methods of inquiry, the study targeted 920 headteachers and 82 District Education Officers (DEO). The representative sample was 279 respondents apportion proportionately as 257 headteachers and 22 DEOs. Multistage sampling was used. Headteachers filled questionnaires while DEOs were interviewed. The questionnaire was pilot tested on 28 headteachers. Cronbach alpha was used to ensure reliability while peer review and pilot testing ensured validity. Responses were received from 247 head teachers and 20 DEOs. Thematic analysis was used to analyse qualitative data while descriptive statistics were used to analyse quantitative data. The two sets of data were merged at the interpretation stage. School infrastructure policy exist in different documents but, is well understood, unambiguous, easy to apply and headteachers have a positive perception of it. The study recommends that the current school infrastructure policy that is spread over different documents be put together into one policy document for better communication, ease of reference and use.***

Keywords: Policy Interpretation, Headteachers, Primary Schools, Somaliland, School infrastructure Policy, Education, Public Schools, infrastructure facilities

1. Introduction

School infrastructure policy guides the establishment and maintenance of school infrastructural facilities to ensure quality education, equitable access and, safe and hygienic environment for learning among others. In Somaliland, the school infrastructure regulatory policy is presented as section mentions in different documents among them the education law, education sector strategic plans, education quality assurance plans and other education policy documents. Other countries, however, have formulated the school infrastructure policy as one document.

Policy interpretation comprises of policy substance interpretation and policy resource interpretation. Policy substance is the 'what' aspect of the policy or the content of the policy regulations. Policy substance interpretation refers to the 'which' aspect of the policy and entails inferring the meaning of the content and provisions of the policy, which should be done rationally without constraining or extending the provisions and the spirit of the policy or what it rationally contemplates [1]. Policy resource interpretation is determining the resources, capacity and other requirements needed to implement the policy [2]. For school infrastructure policy, the substance to be interpreted includes the aspects and details of the policy, types of infrastructure projects facilities, quality of delivered facilities, financing activities, partnership engagements, projects' scope, reporting system, school development planning, and school management obligations for school infrastructure projects. Even when the policy substance is the same, implementers and stakeholders often tend to have varying policy interpretations due to: varying levels of education, varying exposure to the policy, individual efforts made to familiarize with the policy content, personal interest, access to the policy, and policy substance ambiguity among others.

In this study, policy interpretation refers to school infrastructure policy interpretation. The study examined the consistencies and variances in school infrastructure policy interpretation among headteachers and DEOs. The study was done in Somaliland.

2. Research methodology

Guided by pragmatism philosophy, the study was designed as a cross-sectional survey using mixed methods of inquiry. The target population of the study was 1002 respondents made up of 920 school headteachers and 82 DEOs. A representative sample of 279 respondents was determined using Morgan's table at a 5% level of significance [3]. Proportionately, the sample was made of 257 headteachers and 22 DEOs. The sample was drawn using multistage sampling: purposive sampling to draw 7 regions, stratified proportionate random sampling to draw 257 headteachers from the 7 regions and simple random sampling to sample 22 DEOs. Quantitative data was collected from headteachers using a 5-point Likert-type questionnaire that contained 10 Likert items and an open-ended item. Qualitative data was collected from DEOs through interviews. Pilot testing of the questionnaire was done on 28 headteachers. The reliability of the questionnaire was ensured using the Cronbach alpha coefficient of internal consistency. With $\alpha = 0.969$, the research tool was reliable. Pilot testing, peer review and empirical literature review were used to ensure the validity of the questionnaire. Descriptive statistics were used to

analyse quantitative data while qualitative data were analysed using thematic analysis. A convergent parallel design was used to merge the data at the interpretation stage.

3. Findings and discussions

3.1 Response rate

The headteachers filled the self-administered questionnaires which were dropped and picked later. The response was 247 (96.1%) questionnaires returned. Twenty DEO's were interviewed which was a 90.9 % interview response.

3.2 Quantitative data analysis and findings

Descriptive statistics were used to analyse the questionnaire data. For individual items with a low of 1 and a high of 5 (SD-1, D-2, NS-3, A-4, SA-5) the scale was adopted as: 1 < Strongly Disagree < 1.8; 1.8 < Disagree < 2.6; 2.6 < Not Sure < 3.4; 3.4 < Agree < 4.2; and 4.2 < Strongly Agree < 5 [4]. The findings were further grouped into 3 clusters: disagree, not sure and, agree. The mean and standard deviation for the items in the questionnaire; the composite mean and composite standard deviation are presented in Table 1 below.

Table 1: Descriptive statistics for school infrastructure policy interpretation

Item No.	Item Statement	Agree	Not sure	Disagree	Mean	Standard deviation
1	In as far as I know, there are no policy interpretation guidelines for the school infrastructure policy.	28 (11.3%)	40 (16.2%)	179 (72.5%)	3.98	1.020
2	I don't have the entire policy as it exists in different policy documents some of which I don't have a copy.	227 (91.9%)	14 (5.75)	6 (2.4%)	1.47	0.810
3	Of the primary Headteachers I know, most of them believe the school infrastructure policy is good for the school.	158 (64%)	38 (15.4%)	51 (20.6%)	3.73	1.174
4	I have been trained /educated/sensitized on the school infrastructure policy.	25 (10.1%)	61 (24.7%)	161 (65.2%)	2.09	1.014
5	My school complies with all the requirements of the school infrastructure policy.	66 (26.7%)	0 (0%)	181 (73.3%)	2.51	0.971
6	I am conversant with the content of the school infrastructure policy.	23 (9.3%)	56 (22.7%)	168 (68%)	2.17	1.101
7	I know of some existing disputes/litigations/adjudications regarding the school infrastructure policy.	31 (12.6%)	64 (25.8%)	152 (61.6%)	3.66	1.122
8	There are some clauses in the policy that have more than one interpretation.	25 (10.2%)	48 (19.4%)	174 (70.4%)	3.88	1.100
9	There are some aspects of school infrastructure projects that are not covered in the infrastructure policy.	66 (26.8%)	95 (38.5%)	86 (34.7%)	3.15	1.064
10	I find the school infrastructure policy easy to apply.	194 (78.6%)	23 (0%)	30 (12.1%)	4.00	0.982
	Composite mean and standard deviation				**3.069**	**1.0707**

Notes: n = 247. Negative items are reverse scored.

The study examined if policy interpretation guidelines for school infrastructure policy existed. Majority of the respondents 179(72.5%) indicated that the guidelines were there, 28(11.3%) respondents indicated the guidelines were not there, while 40(16.2%) were not sure if the guidelines were there or not. With a mean of 3.98 and a standard deviation of 1.02 the response implies the policy guidelines were there or the policy was straight forward and self-explanatory. This is further explained by the response in item 2 that many of the respondents did not have all the sections of the school infrastructure policy as it was spread over many policy documents. Respondents without the entire policy would certainly have not had access to all the policy interpretation guidelines provided in different policy documents. Comparing with the composite mean of 3.069 and standard deviation of 1.0707, item 1 had a positive influence on school infrastructure policy interpretation and its responses were less spread than the average spread for the variable.

Most of the respondents, 227(91.9%) indicated that they didn't have the entire school infrastructure policy which existed in different documents; 14(5.7%) were not sure, while 6(2.4%) strongly disagreed. This highlights the challenges of policy communication and dissemination when the policy is not set out as one express document but is rather scattered in different regulatory documents: some policy users will have the entire policy while others will only have parts of it. Item 2's mean of 1.47 was less than the composite mean indicating a negative influence. The item standard deviation of 0.810 was less than the composite standard deviation indicating item 3's responses were more compact and less spread as compared with the variable average. Headteachers' lack of access to the policy framework that set the standards for school infrastructure projects negatively affected their interpretation of the policy.

Most headteachers were convinced that the school infrastructure policy was good - 158(64%) while, 51 (20.6%) disagreed and 38(15.4%) were not sure. The mean was 3.73 and the standard deviation 1.174 which indicate item 3 had a positive influence and a wider spread of responses when compared with the composite mean and standard deviation. This shows that headteachers perceived the school infrastructure policy as progressive for the schools.

On whether the headteachers had been trained or sensitized on the school infrastructure policy, only 25(10.1%) of the respondents indicated they had received such training with 161(65.2%) not trained and 61(24.7%) not sure. The item mean was 2.09 and the standard deviation 1.014 indicating a

negative influence and a lesser spread of responses of item 4 when compared with the variable composites of 3.069 and 1.0707 respectively. This shows that a lack of user training or sensitization on the school infrastructure policy negatively influenced policy interpretation by policy users. As to why 61 headteachers were non-committal remained mysterious. However, considering responses on other items and the background of the study, this indifferent response on an item that should have attracted extreme responses only can be attributed conservatism and not wanting to call out their boss.

On whether schools complied with all the requirements of the school infrastructure policy, 181(73.3%) indicated they did not comply with all the requirements while 66 (26.7%) indicated they had achieved compliance. No respondent took a lukewarm position. The mean was 2.51 and the standard deviation 0.971, which shows item 5 exerted a negative influence on policy interpretation and its responses were less spread as compared to the variable's composite mean 3.069 and standard deviation 1.0707 respectively. This finding shows that compliance with the requirements of the school infrastructure policy by schools was low.

A majority of the headteachers, 168(68.0%), indicated that they were not conversant with the content of the school infrastructure policy, 23(9.3%) indicated they were conversant, while 56(22.7%) were not sure. The mean was 2.17 and the standard deviation 1.101 which when compared with the variable composite mean of 3.069 and standard deviation of 1.0707 indicate item 6 exerted a negative influence on policy interpretation and its responses were more spread than the variable's average respectively. The response in this item shows that many headteachers were not conversant with the substance of the school infrastructure policy. This is explained by the response in item 2 that most headteachers did not have the entire school infrastructure policy but only parts of it as it is spread over numerous documents. It follows that headteachers could only be conversant with the parts of the policy they had.

Few headteachers, 31(12.6%), knew of the existence of school infrastructure policy disputes, litigations and adjudications, 152(61.6%) respondents indicated that they knew of no such occurrences, while 64(25.8% were not sure. The mean was 3.66 and the standard deviation 1.122 which show that item 7 exerted a positive influence on policy interpretation and its responses were more spread as compared to the variable's composite mean 3.069 and standard deviation 1.0707 respectively. This finding confirms the earlier findings (item 1 and 3) that the policy is relatively easy to interpret and most headteachers believed the policy is good for the schools.

On policy ambiguity, 174(70.4%) of the respondents indicated that they did not know of any policy ambiguity that existed in the school infrastructure policy, 25(10.2%) indicated that policy ambiguity existed while 48(19.4%) were not sure. The mean was 3.88 and standard deviation 1.1, indicating item 8 had a positive influence on policy interpretation and its responses were more spread as compared to the variable's composite mean 3.069 and standard deviation 1.0707 respectively. This finding shows that the school infrastructure policy, though scattered over different policy documents, was largely clear and concise.

On the comprehensiveness of the school infrastructure policy, 66 (26.8%) headteachers indicated that it did not cover all the aspects of school infrastructure projects while 86(34.7%) indicated that it did, with 95(35.8%) not sure. The mean was 3.15 and the standard deviation 1.064 which when compared with the variable composite mean 3.069 and standard deviation 1.0707 indicate item 9 had a positive influence on policy interpretation. This shows that the policy is regarded as fairly comprehensive but there are aspects of the policy that can be improved and others added.

Concerning the ease of applying the school infrastructure policy, 194 (78.6%) of the respondents indicated that they found the policy easy to apply, 30(12.1%) disagreed while 23(9.3%) were not sure. The mean was 4.00 and the standard deviation 0.982 indicating item 10 had a positive influence on policy interpretation and less spread of responses when compared with the variable composite mean 3.069 and standard deviation 1.0707. This finding that the policy was easy to apply did not, however, result in the full implementation of the policy in all the schools (item 5) due to other aspects of implementing the policy being unfavourable such as inadequate funds and low school capacity among others.

The composite mean for the ten items was 3.069 with a standard deviation of 1.0707, indicating an overall lukewarm position on policy interpretation.

The responses for each school were summed up for the variable on a scale of 10-50. An equidistance of 8 was applied resulting into the following scale: 10 < Strongly Disagree < 18; 18 < Disagree < 26; 26 < Not Sure < 34; 34 < Agree < 42; and 42 < Strongly Agree < 50 [4]. The data was then grouped into three categories: disagree, not sure and agree. The results are presented in Table 2.

Table 2: Respondents' perception of policy interpretation

Response category	Frequency	%	Mean	Standard Deviation
Disagree/low (10<26)	64	25.9	30.64	8.67
Not sure (26<34)	91	36.9		
Agree/high (34≤50)	92	37.2		
Total	**247**	**100.0**		

Table 2 shows the response distribution among those who disagreed 64(25.9%), were not sure 91(36.9%), and those who agreed 92 (37.2%). This shows that, in 64(25.9%) of the schools surveyed, respondents had experienced policy interpretation issues concerning school infrastructure policy while 92(37.2%) of the schools surveyed had not experienced policy interpretation issues on school infrastructure policy with 91(36.9%) not sure. A further examination of the questionnaires revealed that most of the schools who had experienced policy interpretation issues were rural schools. With a mean of 30.64 and a standard deviation of 8.67 the findings indicate that the respondents were overall, lukewarm on whether there were policy interpretation issues or not.

3.3 Qualitative data analysis and findings

Qualitative data collected on policy interpretation using semi-structured interviews with DEOs and comments made by headteachers in the questionnaire were analysed by thematic analysis.

The study found that the school infrastructure policy was plain and straightforward and many respondents were able to understand it (item 1). This is because the policy was written in simple straightforward language. A headteacher commented as follows about the school infrastructure policy:

> *"It is straightforward, like other education policies we have". Headteacher Ceerigaabo district (2019).*

Not all headteachers had the entire school infrastructure policy since it existed in several documents some of which they did not have (item 2). This is in line with [5] who postulates that when a policy is not packed into one document but is instead composed of various mentions in different policy documents, not all users understand or access the entirety of the policy. One DEO commented:

> *"Urban schools have more policy documents with them than rural schools because of more access….. Yes, some schools don't have some policy documents that form part of the infrastructure policy" – DEO 17(2019)*

Most headteachers had a positive attitude towards the school infrastructure policy and believed that it was good for them (item 3). A positive attitude towards a policy by its users and implementers is necessary for the policy to realize its objectives. When policy users have a negative attitude towards a policy, they withdraw their support and may sabotage the implementation process increasing the costs of enforcing the policy and frustrating realization of the policy objectives. Discoursing on this issue, one DEO said:

> *"The policy recognizes the reality and does not put on schools burdens they can't carry. That, in my view, is why there is acceptance"* –DEO *1(2019)*

This finding is in line with [6] who found that performance funding policies did not have a significant effect on student outcomes since the policy changes did not bring about attitude changes. And, among pastoralist communities, negative attitude towards free and compulsory basic education impeded the implementation of Free Primary Education (FPE) [7].

The headteachers had not been trained or sensitized on the school infrastructure policy (item 4). This was largely due to financial constraints at the Ministry of Education and Higher Studies. However, some DEOs had been trained on school infrastructure policy as part of public administration capacity development training, thanks to donors who had funded those training. Sensitizing and (or) educating policy users on a policy is instrumental to its successful implementation. One headteacher commented:

> *"I have not been trained or educated on this (school infrastructure policy)and numerous other policies" – Headteacher Salaxaley region (2019).*

These findings collaborate a study by [7] who found that not sensitizing headteachers in pastoralist communities on the FPE policy had impeded their ability to mount FPE projects successfully.

Schools were not compliant with all the requirements of the school infrastructure policy (item 5). This can partially be attributed to an earlier finding (item 2) that a significant number of schools did not have the entire school infrastructure policy and as such could not possibly comply with the provisions what they did not have. The study also found underfunding of schools explanatory of their non-compliance with the school infrastructure policy. According to [8], the Ministry of Education and Higher Studies is largely underfunded and is therefore unable to significantly fund school development. One DEO noted:

> *"To comply with the policy, schools require a transition. Funding the transition is where the problem is". DEO 13 (2019)*

In their study, [9] offer a different approach to such noncompliance with education policies by schools. They note that funding the schools does not resolve the non-compliance fully; better, they propose, is to redesign and reformulate the policy, and also ensure better implementation.

Many headteachers were not conversant with the content of the school infrastructure policy (item 6). This finding is in line with the findings on *items 2 and 4* that the respondents did not have the entire policy because it existed in numerous documents and they had not been sensitized or educated on the policy respectively. This finding explains the finding on item 5 that the schools were not complying with all the requirements of the school infrastructure policy because they were not aware of all the provisions of the policy. Two DEOs explained this as follows:

> *"Communication is a major challenge. Ministry circulars or policies are often channelled to the REOs (Regional Education Officers), and down to the DEOs, who send them down to reach the school headteachers. But some areas have no telecommunication or paved roads. You look for a headteacher for a week or longer without reaching them" – DEO 4 (2019).*

> *"This is an isolated area and not many headteachers have telecommunication, computers or other essential ICT equipment. Many (schools) operate without important policy documents. They depend on word of mouth communication and since the road network is as you have seen it, it takes time before we can visit these schools and*

equally before they can come to us"-DEO 6 (2019).

The poor state of road infrastructure, lack of telecommunication networks and related ICT hardware had made rural schools less accessible as compared to urban schools. Urban schools were easily reached and received timely ministry communications while rural schools, harder to reach, received ministerial bulletins late and in some cases failed to receive them all together. This explains why more policy interpretation issues were experienced in rural schools than in urban schools.

The study established that there were no significant disputes or litigations regarding the school infrastructure policy (item 7) and there were no notable clauses in the policy that had more than one interpretation (item 8). This supports earlier findings that the policy is simple and realistic. The study also found that the Somaliland school infrastructure policy when compared with similar policies in other countries, was much simpler and shorter, had fewer provisions and, lacked the extensiveness and strictness that other governments have put in their policies; for example, the Solomon Islands school infrastructure policy [10]. Existence of ambiguities, disputes and litigations regarding a policy can be detrimental to its success. This was confirmed by [11] who in a study found that internal policy ambiguities led to disputes, conflicts, back passing, coordination problems and eventually - policy failure; while external ambiguities led to service delivery failures and blame games between the schools and education officials. A DEO expressed the issue as follows:

> *"The reason we have had no litigations and significant conflicts on this policy and others is because our policies are simple, realistic and, do not demand from the school what they can't manage; also because of slow and light enforcement" – DEO 1 (2019).*

The study established that there were no significant aspects of school infrastructure projects that were not covered in the school infrastructure policy (item 9). If important aspects of what a policy seeks to regulate are left out of the policy, the result is policy ineffectiveness. Such a policy will experience partial implementation by those it seeks to regulate who often create short-cuts to circumvent complying with the policy. Since policy implementation and compliance often requires the regulated to incur costs, an incomprehensive policy opens up loopholes for the regulated parties to circumvent the policy to minimise the cost of compliance. If there are no corrective measures the result will be policy failure. This finding corroborates the findings of other studies. [12], found that inequalities in school infrastructures continued to exist because the education policy had not addressed them. [9] found that FPE implementation in Malawi almost failed because the FPE policy did not address school infrastructure requirements needed to support its implementation. In an interview, a DEO observed:

> *"Most of the aspects of school infrastructure projects are addressed in the (school) infrastructure policy. I don't think there are wide gaps"- DEO 11(2019).*

Lastly, the study found that the school infrastructure policy was - for many headteachers - easy to apply (item 10). This can be explained by earlier findings that the policy was simple, clear and realistic to the situations on the ground which would make it easy to apply by its users. A DEO said:

> *"The policy is not so demanding, hence with appropriate funding it is easy to comply with". – DEO 17(2019).*

Ease of application of a policy is an important characteristic of a successful policy. Complex policies that are difficult and expensive to comply with often increase costs of operations for the firms in the industry and act as an entry barrier to potential entrants. Policymakers and regulators also make policies complex for those very reasons to restrict industries and the number of players in those industries.

3.4 Conclusions and recommendations

School infrastructure policy in Somaliland exists in different documents but, is well understood, unambiguous and easy to apply. Headteachers were conversant with it and had a positive perception of it. However, schools largely failed to fully comply with the school infrastructure policy and, many headteachers had not been trained or sensitized on the policy. The school infrastructure policy substance is expressed in a simple to understand language, is clear and, is realistic to its users. However, the fact that it is contained in numerous documents had resulted in a significant number of policy users not accessing the entire policy which in turn had resulted in noncompliance. Low school capitation was a key inhibitor of school infrastructure policy implementation.

To ensure the school infrastructure policy is better communicated to the schools and, to reduce differences in policy interpretation; it is recommended that the current school infrastructure policy that is spread over different documents be put together into one policy document, made accessible and available to the schools and ministry officials. For better implementation of the school infrastructure policy and the realization of policy and school goals, school management should be sensitized and or trained on the policy.

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