

# Parental Involvement and the Development of Metacognitive Skills among Public Junior School Learners in Kyuso Sub-County, Kitui County, Kenya

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## Abstract

The 21<sup>st</sup> century knowledge economy requires learners to possess critical thinking, problem-solving, and digital competencies to address emerging technological, economic, and social challenges. However, there is a gap in learners' ability to develop metacognitive skills. The competencies of metacognitive skills, are essential for preparing junior school learners to thrive in the challenging environment. However, the extent to which parental involvement influences the development of these competencies remains inadequately understood, particularly in rural learning contexts. The specific objective of the study was to determine the effect of parental involvement on the development of metacognitive skills among public junior school learners in Kyuso Sub-County, Kitui County, Kenya. The study was anchored on Epstein's Theory of Overlapping Spheres of Influence by Epstein and the Theory of Metacognition. The research used an Explanatory Sequential Mixed Methods Design. Target population was 1849 from 27 Public Junior Schools in Kyuso Sub-County and a sample of 351 respondents. A pilot study involving 4 teachers and 25 learners was conducted in three public junior schools in Tseikuru Sub-County. Learners' questionnaire had a Cronbach's Alpha of 0.78, while the teachers' questionnaire recorded a Cronbach's Alpha of 0.84. Data was collected using Focus Group Discussions from parents, while quantitative data was collected from learners and teachers. Data collected from the parents was analyzed thematically. The findings showed that parental involvement had a positive effect on learners' metacognitive skills. The study recommends strengthening parental engagement programmes.

**Keywords:** Parental Involvement, Metacognitive Skills, Junior School Learners, Competency-Based Education, Kyuso Sub-County.

## 1. Introduction

In contemporary learning systems emphasis is given on development of higher order skills (HOS) which will help them to think, learn independently and adapt to the challenging learning environment<sup>31</sup>. Planning, monitoring, and evaluating one's own learning are known as metacognitive skills, which are considered key skills for effective self-regulated learning<sup>7,28</sup>. Learners who have high metacognitive competence can recognize their own strengths and weaknesses from learning and

adjust their learning when faced with difficulties in the learning process<sup>13</sup> as well as facilitate the transfer of knowledge in a variety of learning environments<sup>30</sup>.

Skills are cultivated through the process of school instruction and home nurture and in the process of this, it is widely recognized that parental engagement is key<sup>8</sup>. Parental involvement like parental monitoring, communication, guidance and active participation in learning have been linked to metacognitive strategies usage and self-regulation achievement among the learners<sup>2,29</sup>.

The new Kenya Competency Based Education (CBE) curriculum focuses on new learning approaches such as learner-centred, critical learning and self-directed learning which call for good metacognition<sup>14</sup>. But the level of parental involvement in the promotion of this is not yet clearly understood in the literature. In the rural areas, parents are also severely constrained in their ability to support their children due to their limited education, socio-economic autonomy and workloads (..15. Also, research in Tanzania indicates that such spaces are more of a supervisory role for parents compared to being actively involved in the learning process, reflecting and enquiring into metacognition<sup>15</sup>.

This is a typical setting in a rural setting like Kyuso Sub-County in Kitui County. The CBE framework emphasises the all-round development of the learner and it is possible that the variation of parental education, socio-economic status and value on the importance of home learning support could to some extents have a negative effect on the facilitation of metacognitive skills support among the learners in junior school. Some studies have looked into the relationship between parental involvement and students' overall academic performance, while few studies have focused on the relationship between parental involvement and learner's metacognitive skills in a junior school set in a rural community like Kyuso Sub-County.

The aim of this paper is to fill that gap. It was guided by the principal objective of establishing how parental involvement influences the metacognitive skills of the learners in the junior schools of Kyuso sub-County, Kitui County, Kenya while the hypothesis was; Parental involvement has an impact on the metacognitive skills among the learners in the junior schools of Kyuso sub-County, Kitui County, Kenya.

*H<sub>0</sub>: Parental involvement has no statistically significant effect on the development of metacognitive skills among public junior school learners in Kyuso Sub-County, Kitui County, Kenya.*

In the educational field, parental involvement has been accorded as one important determinant in the learning of critical skills in the context of CBE. However, learners in rural areas like Kyuso Sub-County are often not supported with structured and reflective learning support at home. The link between parental involvement and academic performance has been explored in the literature, but little research has been conducted on parental involvement and metacognitive skill development of learners in junior schools within Kyuso Sub-County in a rural context in Kenya, and none, to the researcher's knowledge, on Kyuso Sub-County specifically. This paper is an attempt to fill part of this vacuum to discuss the relationship between parental involvement in learning activities, communication and decision making and metacognitive skills among the learners in this sub-county.

The importance of this study is in both theoretical and practical aspects. Theoretically, the study extends Epstein's Theory of Overlapping Spheres of Influence and Flavell's Theory of Metacognition when combined together<sup>12</sup>, within a context of a rural competency-based curriculum, which has not been empirically studied in the literature which has focused on the theories separately. To practice, the findings are expected to provide input to the school administrators, curriculum implementers and policy makers in Kitui County and other rural counties with regards to the structure of home-based support to supplement the classroom learning to enable learners develop planning, monitoring and evaluation of their learning. The study provides a foundation of evidence for parents to understand what types of involvement (engagement in learning activities, communication, and participating in decision making) are most strongly linked to metacognitive development, so that limited time and resources can be used to increase involvement with practices that are more likely to benefit their children.

## 1.1 Context and Review of Literature

### 1.2 The Concept of Parental Involvement

Parental involvement is a multi-dimensional phenomenon and parents/carers are involved with their children's learning in various ways<sup>26</sup>. It includes supportive interactions, communication, guidance and involvement in learning activities that lead to the academic and personal growth of learners.

Parental involvement can be defined as a partnership between school and family, helping pupils to develop as whole pupils, according to and Bastiani (2025), and parental involvement is defined as parental support to learning activities, including supervision of homework, emotional support and participation in school activities <sup>4,19</sup>. This research focused on three primary areas of parental involvement, namely: parenting, communication and decision-making, in line with the Framework of Six Types of Involvement proposed by Epstein and Sheldon <sup>11</sup>.

Metacognitive skills are given priority within the CBE because they facilitate students' learning and foster critical thinking, problem-solving and the application of knowledge in real-world contexts <sup>14</sup>. Metacognitive skills enable students in planning, monitoring and evaluating their learning process <sup>1,2</sup>. Metacognition is considered to be as a process which has two sub-processes: knowledge of cognition and regulation of cognition <sup>28</sup>; the learners who have high metacognitive skills are able to set their goals, monitor their activity and assess the effectiveness of their learning strategy.

### 1.3 Parental Involvement and the Development of Metacognitive Skills

For the acquisition of learners' metacognitive abilities, parent-child interaction is very important especially in CBE. Begum <sup>5</sup> defines metacognition as knowledge and processes people use to engage in ongoing monitoring and control of their thinking, whereas other studies argue that metacognition consists of two basic components <sup>27</sup>: Knowledge and Regulation, involving planning, mental scripting, self-monitoring, reflection, and problem-solving. These higher order skills cannot be taught individually, but can only be developed through models, reinforcement and preparation, especially at home.

In the study completed by Veas <sup>29</sup> with 1,398 high school students in Spain, three aspects of parental involvement (parental expectations, academic support, and communication) were directly related to high school students' metacognitive strategies and to their academic achievement, the latter mediated by the former. Likewise, in Iran, children raised in a supportive, cooperative, and sociable family environment performed better on metacognitive tasks and a correlation between authoritative parenting and self-assessment and self-handicapping behaviour was found when faced with academic challenges <sup>3</sup>.

Communication between parents and children is found to be a major factor that affects the development of children's metacognition in parent-child communication studies <sup>21</sup>. In Ghana, learners who were able to show a resilient dialogue with their parents about their school performance had more planning and monitoring capacity' conducted a study in Nigeria with junior secondary schools that showed that learners whose parents engaged in regular communication to discuss the importance of learning and learning progress had higher capacity to plan and monitor themselves, reflect on their thinking processes, and had higher dependency on learning <sup>6,24</sup>. Learners' emotional stability and their attitude towards learning is fostered through intentional parent-child interaction, where they regulate their thinking, pay attention and think about their learning process <sup>17</sup>. However, in Tanzania, Kija and Mosha reported that while parents engage in formative learning with their children, they may be too busy to be able to spend time on constructive academic discussions that will enable learners to use the metacognitive skills <sup>15</sup>.

Parental decision making is also significant in the development of metacognitive skills by involving the parents in the decision-making process of their children's education. Parents and leaders working together foster a sustained learning culture that enables learners to plan, reflect and learn on their own all of which are metacognitive characteristics <sup>22</sup>.

Metacognition - parental involvement has been a topic of interest in various contexts, but less is known about the nature of this relationship in junior schools in Kenya in the context of CBE. In fact, the existing studies have neglected some of the rural and marginalised sub-counties like Kyuso and most studies available have concentrated on parental support in relation to overall academic achievement but not the specific metacognitive process that can be targeted. This study aims to address this gap by examining individual effects of parental involvement in learning activities, communication style and decision making on the development of metacognitive skills of junior school learners in this rural setting in Kenya.

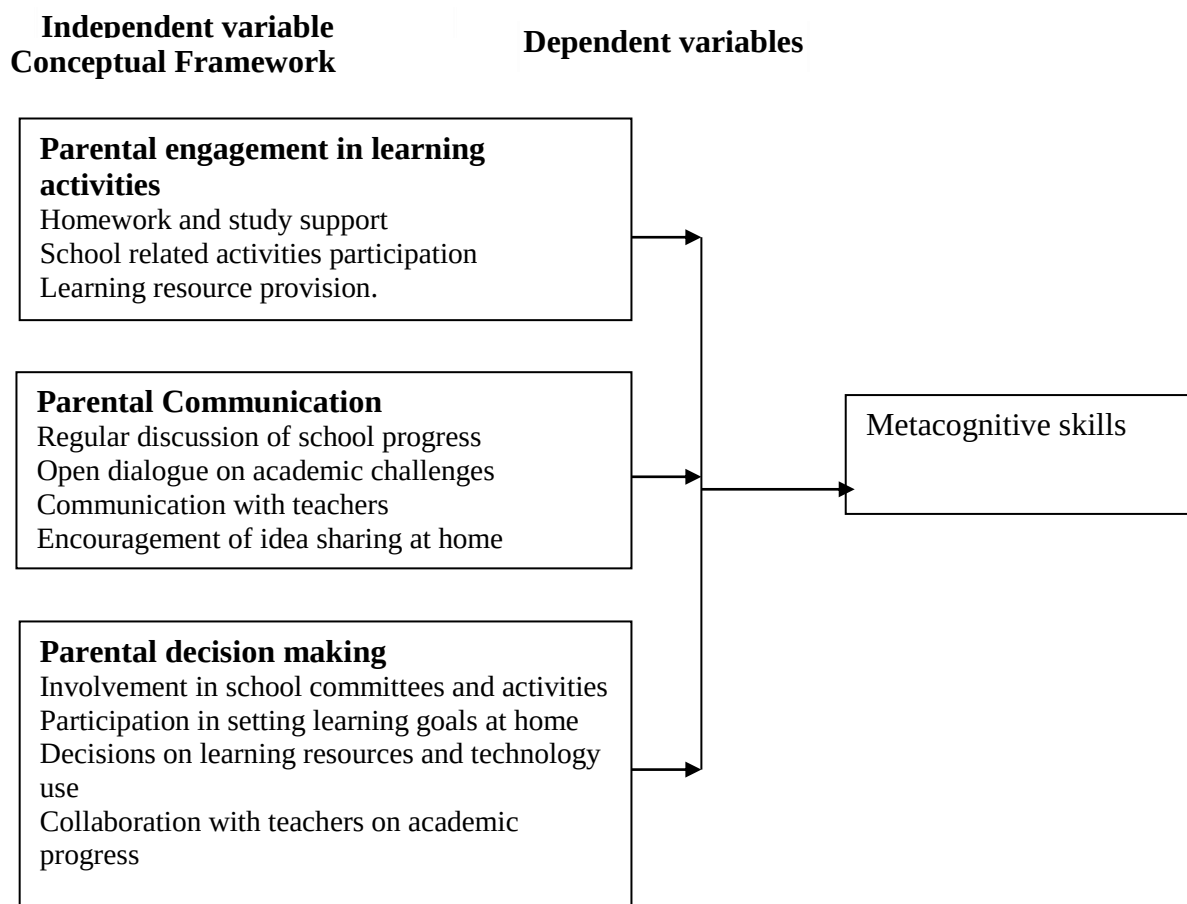
#### 1.4 Theoretical Framework

This study was based on Epstein's theory of Overlapping Spheres of Influence<sup>9</sup> and Flavell's theory of Metacognition<sup>12</sup>. Epstein, Sheldon, and Hine (2025) present a theory that examines how students' school success is connected to the following areas: parenting, communication with families, family-school volunteering, family learning at home, family decision-making, and family and community participation. In the context of the present study, the model is useful because it systematically examines the role of various types of parental involvement in metacognitive development in CBE: engagement in learning activities, communication and decision-making.

Metacognition is the idea that "thinking about thinking"<sup>12</sup> is a process that can be subdivided into metacognitive knowledge, which means to be aware of one's own thinking, ability and limitations, and thinking strategies, and metacognitive regulation, which means to plan, monitor, and evaluate one's own thinking while completing learning tasks consciously. Flavell believes that metacognitive skills develop from environmental factors, particularly through interactions with family members who scaffold the development of metacognitive skills by helping learners plan, monitor and evaluate their learning<sup>12</sup>. The theory explains the behaviours through which parental involvement has an impact on the learners' metacognitive development, including self-regulation and critical thinking, which can be discussed together and encourage learners to think about their problems.

Conceptual model of the relationship of three dimensions of parental involvement (engagement in learning activities, communication, involvement in decision-making), self-concept and government policy, and the development of metacognitive skills of learners is presented in figure 1.

Figure 1: Conceptual framework linking parental involvement to the development of metacognitive skills



## 2. Materials and Methods

### 2.1 Research Design and Population

This study employed the Explanatory Sequential Mixed Methods Design, where quantitative was the major data collection method in the study followed by qualitative for explaining and elaborating the quantitative findings. The responses were targeted from 27 public Junior Schools in Kyuso Sub-County with a total of 1,047 Grade 8 learners, 183 teachers and 619 parents of Grade 8 learners (Kyuso Sub-County Education Office, 2025). The grade 8 learners were chosen because they have been in the junior school for a long period of time, and thus can answer all the variables of the study with facts.

### 2.2 Sample Size and Sampling Procedure

The sample size of learners was determined from Krejcie and Morgan's Table (1970) and the proportionate sampling method was then employed to determine the numbers of learners needed in each of the 27 junior schools, while simple random sampling was used to select the required number of learners in each school <sup>23</sup>. The teachers were purposively selected because they have first-hand experience teaching Grade 8 learners. For representation in Focus Group Discussions (FGD), 40 parents were purposively sampled, which was four FGDs with ten parents in each, a sample size between 30 and 50 for qualitative research <sup>18</sup>. The type of sampling used, purposive sampling of parents, was suitable for the study as it involved only parents with children sampled and the FGD format offered parents the opportunity to build upon each other's experiences in providing learning support at home, while also providing opportunities for discussion and comparison. Table 1 presents the number of samples obtained for each of the categories of respondents.

**Table 1 Sample Size by Respondent Category**

| Category      | Target Population | Sample Size | Method                  |
|---------------|-------------------|-------------|-------------------------|
| Learners      | 1,047             | 281         | Krejcie & Morgan (1970) |
| Teachers      | 183               | 30          | Purposive sampling      |
| Parents (FGD) | 619               | 40          | Purposive sampling      |
| <b>Total</b>  | <b>1,849</b>      | <b>351</b>  | -                       |

### 2.3 Instruments and Data Collection

Three different instruments were used. A Learners' Questionnaire (Cronbach's Alpha = 0.78), with a 5-point Likert scale, was used to measure the self-assessed metacognitive skills of the learners, and a Teachers' Questionnaire (Cronbach's Alpha = 0.84), also using a 5-point Likert scale, was used to record teachers' professional assessment of students' metacognition and observation of parental involvement. Both instruments met the acceptable criterion of reliability used in social science studies which was 0.70. They were tested in three public junior schools in the neighbouring Tseikuru Sub-County, involving 4 teachers and 25 learners.

Focus group discussions with parents were conducted using a semi-structured discussion guide with parents regarding their support in planning, thinking, and self-monitoring activities of children at home, which involved qualitative data collection. Questionnaires were administered in school with the researcher's supervision and FGDs were held at a time agreed with the school administration. Ethical clearance was obtained from the Tharaka University Ethical Committee and National Commission for Science, Technology and Innovation (NACOSTI), informed consent was obtained from the students and parents involved in the study.

### 2.4 Data Analysis

The quantitative data obtained from the learners and teachers were analysed using SPSS version 28, with descriptive statistics (means and standard deviations), correlation analysis, and regression analysis used to test the hypothesis. Qualitative data from the parent focus group discussions was

analysed using thematic analysis and these findings were combined with the quantitative data to give a contextually rich description of how parental involvement relates to learners' metacognitive development.

### 3. Results and Discussion

#### 3.1 Metacognitive Skills as Reported by Learners and Teachers

Moderate to high metacognitive skills were reported by learners on the five dimensions measured, with the highest mean scores and lowest SDs reported for making changes when a learning strategy was not working ( $M = 3.86$ ,  $SD = 0.30$ ) and planning how to complete assignments before beginning them ( $M = 3.86$ ,  $SD = 0.30$ ). The lowest mean score, with the highest SD, was recorded for awareness of one's strengths and weaknesses in learning ( $M = 3.71$ ,  $SD = 0.40$ ). Generally, teachers agreed with these reports, and rated learners lower in adjusting strategies when having difficulties, with the most significant differences between the ratings of learners versus the rating of teachers.

#### 3.2 Parental Involvement in Metacognitive Development

Overall, a moderate level of academic support was reported at home with the lowest agreement reported for parental support with problem-solving or critical thinking practice ( $M = 2.26$ ,  $SD = 0.96$ ), and highest for parental supervision of homework progress ( $M = 3.20$ ,  $SD = 0.90$ ). Teachers also found that parents were more likely to be supervisors, who are present and take up time for studying ( $M = 2.94$ ) than active facilitators of study strategies, such as planning and self-monitoring ( $M = 2.41$ ); however, the general pattern was similar.

The quantitative results were substantiated by the parent focus group discussions. Parents were often referred to as 'supervisors' not 'teachers', especially when they did not know the content of the CBE curriculum, and one parent said that they didn't have to grasp what was being taught, 'just make sure they sit down to do their homework'. Many parents, even in those who did not see themselves as being reflective facilitators of learning, were actively and consciously engaged in reflection and planning in informal ways, for example, by asking children what they had done well or poorly in homework, encouraging them to try a more difficult exercise first, and checking exercise books. Time limits were among the factors that limited these practices.

#### 3.3 Regression Analysis

A regression analysis was conducted to examine how the three dimensions of parental involvement (engagement in learning activities, communication style, and decision-making) affected learners' metacognitive skills.

**Table 1** Summary of correlation Analysis on Metacognitive Skills

|                | Parental engagement | Communication style | Decision-making |
|----------------|---------------------|---------------------|-----------------|
| Pearson r      | .276                | .183                | .199            |
| Sig (2-tailed) | .000                | .009                | .004            |
| N              | 204                 | 204                 | 204             |

**Table 2** Model Summary of the Regression Analysis on Metacognitive Skills

| Model | R    | R Square | Adjusted R Square | Std. Error |
|-------|------|----------|-------------------|------------|
| 1     | .197 | .039     | .033              | 1.09219    |

The regression model showed a weak positive relationship ( $R = 0.354$ ), and  $R^2 = 0.125$  indicated that parental involvement accounted for 12.5% of the variance in metacognitive skills. The overall model was statistically significant ( $F = 9.558$ ,  $p < .001$ ) and the null hypothesis was rejected. All three predictors were positive and statistically significant: engagement in learning activities ( $B = 0.237$ ,  $p < .001$ ), communication style ( $B = 0.251$ ,  $p = 0.027$ ), and decision-making ( $B = 0.268$ ,  $p = 0.025$ ).

### 3.4 Discussion

The results of the finding of a statistically significant and yet small effect of parental involvement on the metacognitive skills of learners fully support the findings of Veas in Spain who found that parental expectations, support and communication were all statistically significantly related to the use of metacognitive strategies by learners<sup>29</sup>. It also corresponds to the study of Bejarin and Quezada revealed that parent-child academic communication supports the planning and self-regulation of learners in Ghana revealed self-regulation and planning in the study of academic communication among learners in Nigeria<sup>6,24</sup>. The researchers' findings in this study tally that time and resources are constraint factors and not a lack of care about the academic development of the learners limit the involvement of parents<sup>15</sup>.

The supervisory role of parents in the learning process is reflected in studies conducted in Tanzania, where parental involvement in teaching and learning is also seen as mainly supervisory<sup>15</sup>. This implies that the most common metacognitive skills that were rated as strong were planning and self-evaluation, whereas the least common was adjustment under difficulty, suggesting that the most common metacognitive skills were more easily reinforced by the home-based support than the more challenging reflective adjustment under difficulty. This is aligned with the difference between metacognitive knowledge and metacognitive regulation as proposed by Flavell<sup>12</sup>: the parental practices mentioned during the focus group discussions (e.g. checks homework, asks what learners find hard etc.) seem to mainly promote awareness of what the learner knows or thinks, rather than the more difficult regulation necessary to change strategy mid-task. Similarly, the comparative power of self-evaluation observed in this study is in line with Pantiwati and Husamah that self-assessment and peer-assessment used in structured manner in active learning classrooms can increase the metacognitive awareness possessed by the learners, such as self-evaluation to assess the knowledge possessed by learners<sup>25</sup>.

In Epstein's model, all three predictors of this study, learning activities, communication, and decision-making, correspond to her 'learning at home,' 'communicating,' and 'decision-making' dimensions respectively. Learning activities proved to be the most significant, followed by decision-making and communication style, which also had significant but weak effects. This is partly in line with the findings of Mpekethu and colleagues<sup>20</sup>, that many rural parents were not directly involved in the school decision-making structures; in this study, though the involvement of parents was limited, they still had a significant influence on the metacognitive development of learners.

The quantitative and qualitative findings of this study, therefore, all point to the same picture: parental involvement in Kyuso Sub-County is real and well-intentioned, however, limited in both scope and depth due to parents' limited knowledge of the CBE curriculum and competing demands on their time. This indicates that interventions involving the home to enhance metacognitive development should not assume a lack of parental motivation to engage in the development of their children's metacognition, but rather should consider how the parents' current supervisory involvement can be translated into a more carefully reflective approach and through simple, low-cost pedagogical interventions that do not require special pedagogical knowledge.

### 3.5 Limitations of the Study

This study was conducted with grade 8 learners in Kyuso sub-county in Kitui county and the results may not be generalised to other sub-counties, grade levels or educational contexts as they might have different socio-economic and infrastructural context. Self-reported Likert scale data from both

learners and teachers opens the door for social desirability bias especially on the amount of parents' involvement in learning activities at home. The regression model was statistically significant, but the  $R^2$  (0.125) was relatively low compared to the other variables, suggesting that other variables not measured in this study, such as the instructional practices of school and teacher support and motivation of learners, may have a more significant influence on the variance in metacognitive skills. The cross-sectional design also restricts the extent to which causal conclusions can be drawn about the time course of the effects of parental involvement on metacognitive skills. Longitudinal research designs and direct observation of parent/child interaction to complement parent-only self-report data would be valuable extensions for future study, as would be an exploration of whether the pattern of findings is replicated across other sub-counties in both rural and urban areas in Kenya.

#### 4. Conclusion

Results indicated that metacognitive skills of learners in Kyuso Sub-County in Kitui County, Kenya in junior schools were statistically significantly affected by parental involvement ( $F=9.558$ ,  $p=0.001$ ). In terms of planning and self-evaluation, learners and teachers agreed that these skills were the most developed, and adjusting strategies when facing difficulty was the least. Discussions with parents show that many of them who are not formally pedagogically trained are involved in reflection, planning and self-monitoring, such as observing their child's work, asking questions and encouraging their child when they make mistakes.

The paper argues that while very small, parental involvement in learning activities and communication can make a difference, is complementary and not an alternative to what takes place in the school. The paper calls for programmes to enhance parent engagement that provide easy-to-follow, step-by-step information for parents in rural school communities to plan, monitor and reflect on their completed tasks with children, with the regular involvement of teachers.

The results have a number of policy and practical implications for the Competency Based Education system in Kenya. Structured Parent Orientation sessions should be considered in rural sub-counties to help school leaders and Ministry of Education staff build capacity of parents/caregivers, irrespective of their level of education, to carry out basic activities such as checking homework, asking reflective questions and encourage pupils to give their reasoning. Supporting this can be done by creating brief, low-literacy notes for teachers to send home that take the metacognitive strategy from the classroom into the home. Policy-wise, Kenya's Basic Education Curriculum Framework should be strengthened to include Parent involvement as an additional strand of competency-based education and provide resources for parent seminars in rural and marginalised sub-counties like Kyuso.

Further investigation of the development of parental involvement over the transition from one grade level to another within the Junior School phase of schooling and its potential to enhance the communication aspect that was identified as important for involved parents in this study, as well as how digital communication tools might be used to further strengthen this area, is recommended for future research. Comparative studies across a number of sub-counties of varying socio-economic characteristics would also help to determine if the patterns observed here - especially the high prevalence of a supervisory parenting style - are typical of the rural context in Kenya in general or specific to Kyuso Sub-County.

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#### Declaration of Interest

Conflicts of interest: none.

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