

**The Impact of Online Learning as Emerging Technology on Parents: Case Study  
of Parents of Primary School Children in Nairobi, Kenya.**

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**Abstract**

Kenya, as a nation has a stable schooling system based on synchronous classroom learning. The advent of the COVID 19 pandemic has led to the sudden shift in paradigm to remote schooling learning systems. Several studies have been carried out on remote schooling systems and the impact of parent's involvement in children's remote school, but none has been sighted on its impact on parents. The objective of this study was to determine the impact of the sudden paradigm shift on parents of remote schooling pupils in Kenya during this pandemic. A descriptive survey design was utilized. Primary data was collected by online questionnaires and secondary data from past studied. The analysis was done with a statistical application. It was found out that, remote schooling may be easily accepted by many Kenyan parents with 39.8% of parents indicating that they will recommend remote schooling having indicated some benefits derived from it and 24.8% indicating that they will not. It was therefore recommended that the national government should address factors that may hinder effective remote learning, thus encouraging parental involvement and support. It was also recommended that the government and education practitioners should officially develop and implement standards and curriculum for the implementation of remote learning in Kenya in preparation for future pandemics.

***Keywords: remote schooling, remote learning, descriptive survey design***

**1.0 Introduction**

Traditionally, schooling in Kenya has been by face-to-face classroom learning. Due to the COVID 19 pandemic schools had to be shut down worldwide to maintain social distancing that was required to slow down the rate of spread of the virus. This shut down covered every form of school from nursery to tertiary institutions and every kind of gatherings, including worship centers and markets [20]. The calendar and curriculum of most schools were highly affected because the shutdown was abrupt. To

continue with school syllabuses and maintain uninterrupted school calendars, some schools, mostly private schools, have decided to continue with their school curriculum employing remote schooling [17].

Remote schooling is a schooling system where students and instructors are separated by distance; thereby, they cannot meet in a classroom setting. Teaching is carried out via technology such as video conferencing, discussion boards, audio bridges and learning management systems. Remote learning could be both Synchronous where education is carried out live with the students or asynchronous where students can engage in learning at their convenience independent of the instructor. Remote schooling is a form of homeschooling since learning is taken place at home [20]. The difference is that the parents are not the teacher in remote schooling as in homeschooling. Remote schooling is taken up by students for reasons such as the convenience of study from any part of the world, cheaper education cost, elimination of time wastage in commuting and natural causes such as pandemics, weather and natural disasters. Most private primary and secondary schools in Kenya decided to take up the synchronous and asynchronous remote schooling system, which is entirely novel to the community. This study is to examine the effect of this sudden shift on the parents of primary and secondary school students who are involved in the remote schooling system [18].

The COVID 19 pandemic has led to a sudden change in lifestyle for both parents and students. Abruptly parents had to start working from home and schools were closed. To maintain continuity, some primary and secondary schools in Kenya had to roll out remote schooling. While parents were still trying to adjust to working from home and having their children in their workspace, the additional responsibility of homeschooling by remote schooling was laid on them. Studies have been carried out on remote schooling, but no research was cited on its impact of remote schooling on the parent of remotely schooled students in Kenya. This study was undertaken to understand the effect the extra responsibility of homeschooling was having on parents in Kenya during the pandemic.

Due to the pandemic, continuity of education was at stake. No one could determine the exact time the epidemic would be over, and schools would be able to resume. Such situations have a ‘summer learning loss’ effect on student whereby most of the things learnt in the past has been forgotten [6, 13]. This posed a lot of concern to both parents and teachers. Secondly, The Education Cabinet Secretary announced that Kenya Certificate of Primary Education (KCPE) and Kenya Certificate of Secondary Education (KCSE) would be administered as scheduled in 2020 except otherwise guided [17]. With the students out of school, this was also a concern to both parents and students. Likewise, with the prevailing situation, some parents lost their jobs, and some had to settle for less pay. Parents were struggling with meeting up with basic needs as families must spend more money on feeding and some other basic amenities. This puts financial pressure on parents. Therefore, the objectives of this study were (i) to determine if there are better ways for parents adjusting to remote schooling, and (ii) to determine what impact remote schooling has on parents.

## **2.2 Theories related to the study**

### **2.2.1 Innovation-diffusion theory**

In 1995 Roger proposed the theory of innovation-diffusion, which was to enhance the foundation of conducting research on adoption and innovation acceptance. The research was synthesized from over 508 diffusion studies which resulted to the 'diffusion of innovation' theory whereby the individuals, groups and organization were to adopt various innovations. The theory explains in detail the procedures for which an innovation is passed through specific routes over time among the members of a social system [19].

### **2.2.2 Technology acceptance model**

This is among the most accepted model of technology acceptance. In [10], Davis suggested the Technology Acceptance Model (TAM) with two main factors that affect the usage of new technology by an individual regarding his or her intentions. That is how easy it is to use and how important its usage is to an individual or group. Example when an old person finds digital games to be very difficult to play or as a waste of time they will be unlikely to accept this technology, but for an older person who finds digital games to be easy to learn or as a way of providing the needed mental stimulation they will be more likely to accept to learn how to use the digital games thus adopting the technology. Though TAM has been criticized in different ways, it functions as an important general framework and it is very consistent with different research being done on the factors that affect older adults' intention to use new technology [8].

## **2.3 The impact of Parental involvement in children's online learning**

Parental involvement is a pivotal component of the success of a child's education, be it physical education in schools or virtual learning with online Schooling. Parental contribution impacts better grades and higher accomplishments [1]. It additionally powers educators to increase current standards and furnish students with significant instructing and learning encounters [1]. The home learning condition is more likely to play a vital role in children's learning outcome as most learning is presently done in the home.

However, sufficient parent involvement and correspondence is one of the most challenging aspects of online Schooling or virtual learning. No standard exists across online schools that controls what is imparted to guardians about their duties or how that data is conveyed. Some online schools expect guardians to watch a video that clarifies their job as a supervisor, or mentor, however, doesn't consolidate an ensuing check for comprehension or perception to ensure that guardians are sticking to the prerequisites. Moreover, guardians don't have the preparation to give similar assistance needed to encourage their child's participation in online Schooling [12].

For parental inclusion to happen and be viable, schools may consider to consider furnish guardians with different chances to have their influence in their youngsters' training. Accordingly, instructors

must be available to this structure by keeping up a steady correspondence with families. Along these lines, they will be bound to conquer the vast majority of the difficulties that thwart parental involvement [1]. Other factors, such as parental reinforcement equally play a role in the success of their children's virtual learning. Parental support entails parent's behaviors that contribute to the development and strengthening of a child's positive attitude towards learning [16]. It further involves a parent's positive attitude such as self-confidence which impacts on the child and encourages better attitude towards virtual learning.

A recent study [9] revealed about 50% of teachers reporting to have received more than three-quarters of children's participation in online schooling, with about 29% of the children been supervised by their parents, and more confident parents felt like instructors themselves [9] any case, the nature of that supervision changes, with contrasts in how individual guardians were in giving learning support to their youngsters. While 42% of guardians generally were certainly supporting the entirety of their kids, this figure was higher for white-collar class guardians (47%) contrasted with regular workers guardians (37%) [9].

#### **2.4 The Challenges parents faced in remote schooling.**

**Unavailability of technology and tools for remote schooling.** Most schools make available computers and internet facilities on the school premises for studies. Parents have paid for these facilities, and such may not be replicated at home. With the advent of remote schooling, it has become a necessity to make systems and internet facilities at home for remote schooling. This will come at an extra cost to parents.

- **Emotional concerns on availability and stability of internet access:** In Kenya, not all locations have access to a stable telecommunication network. A parent will be worked up because the child is missing out if the family lives in an area with no, bad, or unstable internet access. This could also impact their health negatively.
- **The financial implication of catering for the needs of all the children:** Parents having more than one child schooling must make available computer systems available for each child since schooling is likely to be taking place simultaneously. This will be a heavy financial strain for parents, especially the middle and lower-income class parents who may not be able to afford such.
- **Parental involvement in child schooling:** Parents with younger children will have to be highly involved in the use of technology with their children to ensure they have a seamless class. This may require them to be available most of the time with the children during lessons. This is going to take a toll on their time, which may have a negative impact on their productivity.
- **Parental assistance with technology and academics:** Remote schooling will also involve parents helping their children with assignments and submissions. Uneducated parents and those who do not have a good understanding of the subjects and technology will find these difficult.

- **Restriction on parent's personal interest:** The level of attention that parents have to give to their children's studies may affect the social needs and personal interest of the parents.
- **Extra cost on feeding student:** students are fed lunch in most schools but due to the pandemic, parents have to spend extra cost on providing lunch for their children at home.

### **2.5 The benefits of remote schooling to parents**

- Cut in cost of child's Schooling: the cost of commuting the child to school is cut off.
- Parents have a sense their children are secured: parents are assured of children's security, which they could be bothered about if the children were schooling with others.
- Parents can monitor the quality of education the children are getting to be around during the children's classes helps parents to monitor the quality of education the children are getting.
- Parents can monitor the children's character and attitude to education.
- It helps parents and children to bond better.
- Better support for children with disability: remote learning will enable parents to give better support to children with disabilities.

### **2.6 Related works and findings**

A meta-analysis was undertaken by [4], on three types of interaction treatment in remote schooling. The study covered all schooling from all ages. The study compared three types of interaction treatment; student-student, student-teacher, and student-content interactions to other remote learning instructional treatment such as media and conditions designed in course. The meta-analysis was carried out using 74 studies yielding 74 effects and effect size of achievement of 0.38. The result supports the importance of the three interaction types and found a strong association between strength and achievement of synchronous remote learning courses compared to mediated synchronous or face to face to face course interactions. This work was extended by [7] on two forms of student-student interaction; contextual and design. The meta-analysis compared the effect of these interventions on student's achievement outcomes and discovered the design interaction intervention had a better effect.

A study was varied out by [2], investigating parents' understanding and perception of supporting, encouraging and adopting e-learning in the United Arab Emirates. They used primary data based on responses of 1520 parents to a questionnaire survey and secondary data from publications on publications on parent's perceptions. The results revealed that parents were moderately satisfied with the computer competence of teachers and highly satisfied with the computer competence of students. No significant difference exists in the parent's perception of e-learning. The study also showed that parents perceived that students learning quality could be improved by e-learning due to accessibility to a wide variety of learning materials.

A rapid evidence assessment on remote learning was carried out by [10] to respond quickly to policy challenges of remote learning during school closure due to COVID 19. The report summaries 60

systematic reviews and meta-analyses. Finding from extracted data covered 5 key topics in online learning, including; remote teaching and learning, blended learning, computer support collaborative learning, computer-assisted instructions, and education games. The review on remote learning spanned a few studies as documented in [10], but no evidence of remote learning for primary school was available. This study revealed that key findings and implication to include; “Teaching quality is more important than how lessons are delivered, Ensuring access to technology is key, particularly for disadvantaged pupils, Peer interaction can provide motivation and improve learning outcome, Supporting pupils to work independently can improve learning outcomes and different approaches to remote learning suit different tasks and type of content”.

### **3. Research design and methodology**

#### **3.1 Locality of the project and Beneficiaries to the project**

This study was carried out on parents with children in primary schools in Nairobi County of Kenya, especially for those who have been able to implement the home-schooling during COVID 19.

#### **3.2 Research Design approach**

The descriptive survey design was used in conducting this research. Descriptive design is not restricted to fact-finding but may often result in the formulation of important principles of knowledge and solutions to significant problems. It is more than just a collection of data since it involves measurements, classification, analysis comparison, and interpretation of data. It is principally concerned with the present, although it often considers the past [5]. A descriptive survey was chosen because it can gather a large amount of information from many respondents in confinement and in a time-saving manner.

#### **3.3 Population of the study (Target group)**

This study focused on all parents with school-going children in primary schools in Nairobi County, Kenya, as the population, out of which the sample was taken. The questionnaires were randomly given out to the sample respondents.

#### **3.4 Sample Size and sampling technique**

The study employed a purposive sampling method to get feedback from the 137 respondents to determine the impact on homeschooling on parents. The sample comprised of subscribers of different age groups, educational levels, professions, and social setting of the research site. The information obtained was used to draw the status that was generalized for the whole country. This sample was arrived at due to the limitation of the extensive research site (countrywide), available resources, and time.

Nonetheless, the sample provided indispensable data that was used to draw logical conclusions. A sample size determination formula was used to arrive at the sample size for participants to be sampled in the study. The sample size of this study was determined by equation 1.

$$n = \frac{(Z^2 * p * q)}{d^2} \qquad \text{Equation 1}$$

Where:

n = sample size

Z= 1.96 i.e. the significance level set at 95% confidence interval which corresponded to Z value of 1.96

p = target population proportion of the total population estimated to have the characteristics being measured.

q = variable which was calculated as (1-p)

d = acceptable error level (set at in this study)

Therefore, the sample size of this study was calculated as follows:

$$n = \frac{1.96^2 \times (0.1) \times (1-0.1)}{0.05^2}$$

$$n = \frac{3.8416 \times (0.1) \times (0.9)}{0.0025}$$

$$n = \frac{3.8416 \times (0.1) \times (0.09)}{0.0025}$$

$$N = 137$$

### **3.5.1 Primary Data Collection Methods**

The primary data collection method was a questionnaire that was administered online using google forms. This involves sending out a form with a series of questions for individuals to fill. Questionnaires were sent out randomly to individuals who were willing to take part. The individuals were asked about their challenges in regard to supporting remote schooling for their children and how an online system would benefit them. Moreover, they were asked whether they would recommend the online remote schooling.

### **3.5.2 Secondary Data Collection Methods**

During the Literature review section of the research, data was collected from online journal articles and online reports on the challenges of remote schooling.

### **3.6 Data analysis methods**

Data was collected in a quantitative form that was assembled from google form was sorted then analyzed using Statistical Package for the Social Sciences (SPSS) version 21. The statistical analysis methods done were charts and graphs to plot frequencies, which will bring out the patterns in the data. The descriptive analysis also was used to find the mean deviation, frequency, and percentage that guided on identifying the effectiveness of ICT integration in homeschooling and its impact on the parents of primary school children in Nairobi County of Kenya.

## **4. Research Findings and Analysis**

### **4.1 Response rate**

Response rate, also known as completion rate or return rate, is the number of people who answered the survey divided by the number of people in the sample. In this case, the researchers carried out the survey in the form of a questionnaire using google forms and got 117 responses out of the 137 targeted responses therefore, making the response rate is 82%.

### **4.2 Demographics results**

#### **4.2.1 Distribution by gender**

From the study findings, a higher percentage were female at 57.7% and male respondents at 42.2%. This is illustrated by the pie chart below.

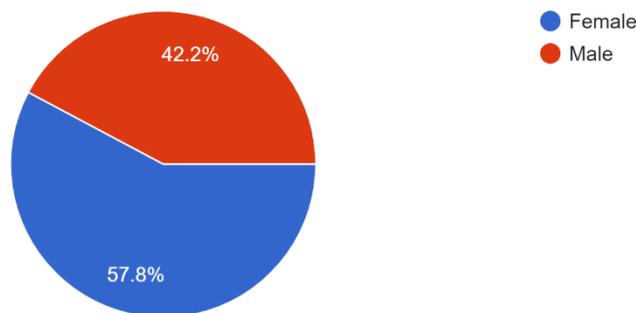


Figure 4.1 Responses to Gender

#### **4.2.2 Distribution by age group**

For the sake of this study, the respondents were divided into age groups as follows: 20-30 years, 31-40 years, 41-50 years, over 50 years. From data collected, most of the responses came from the 31-40

years age group at 59.5%, followed by 41-50 age group and least response from the over 50 years group.

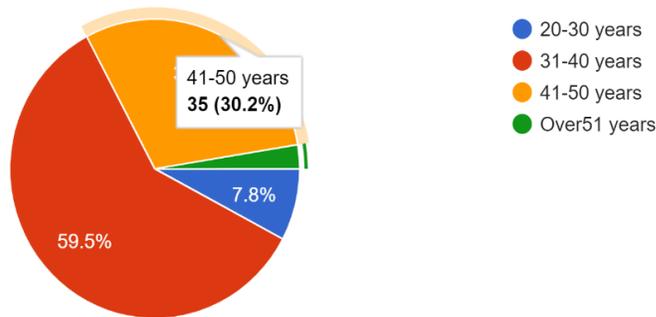


Figure 4.2: Responses on Age

#### 4.2.3 Distribution by parents with children in primary school.

The questionnaires were distributed across ages. The study found out that those with children in primary school formed the bulk of the respondents at 97.4%, and only 2.6% did not have children.

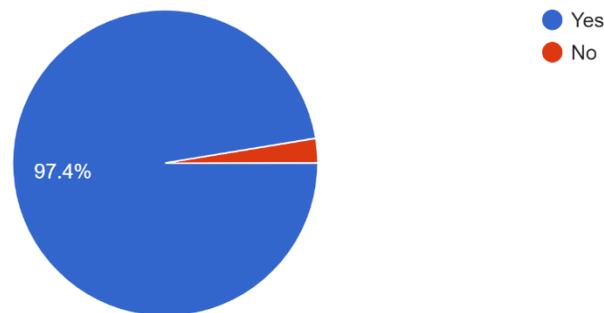


Figure 4.3: Responses on Distribution by parents with children in primary school.

#### 4.2.4 Distribution by type of primary school children attend.

From the study findings, a majority of the respondents have their children attending private/individual owned schools at 57.8%, followed by private/church mission school at 28.4% and only 13.8% of the

respondents' children attend public/ government-owned school. These results are depicted in the pie chart shown below.

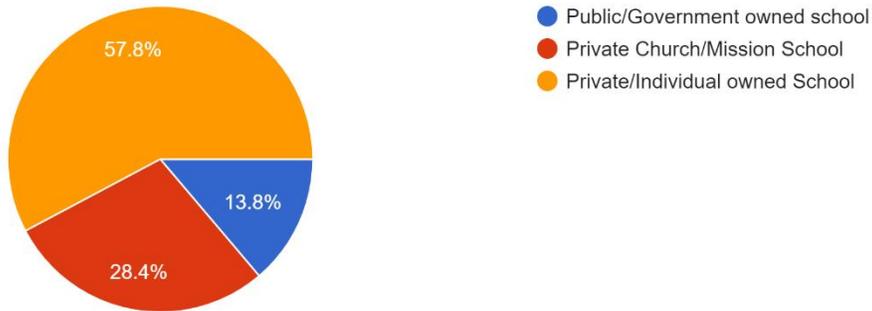


Figure 4.4: Responses on Distribution by type of primary school children attend

#### **4.2.5 Distribution by number of children in primary school of the respondents**

The data collected from the study show that the majority of the respondents had between 1 and 2 children in primary school, and 19.1% of the respondents had between 3 and 4 children in primary school. Then those with 5-6, 6-7, and over 8 children in primary school were very few at 2.6% collectively. This information is summarized in the pie chart below.

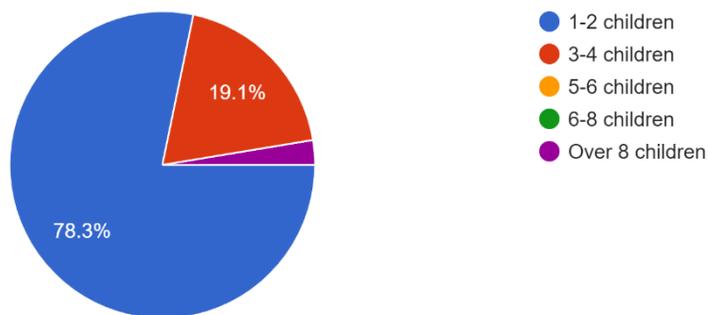


Figure 4.5: Responses on Distribution by number of children in primary school of the respondents

#### 4.2.6 Distribution of children by class

The study data collected shows that most of the children are in the upper primary at 53% while 44.3% response rate indicated that children were in pre-primary classes. The rest of the respondents had their children in lower primary levels, as the graph below shows.

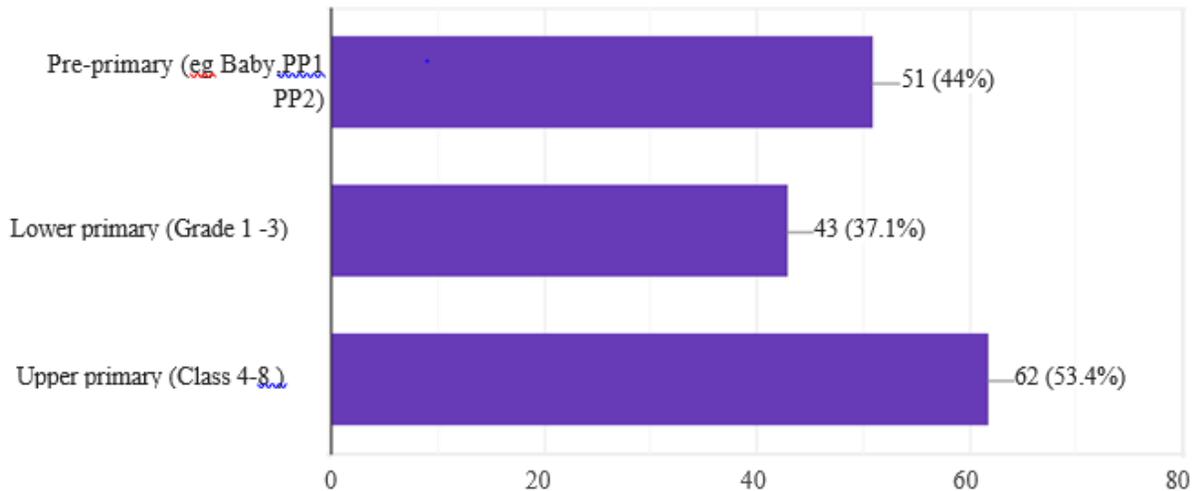


Figure 4.6: Responses on Distribution of children by class

#### 4.2.7 Distribution of children by online class attendance

The study results show that respondents have their children attending online classes at 58.3% response rate while respondents at 41.7 % indicated that their children do not participate in online classes. The pie chart below illustrates this result.

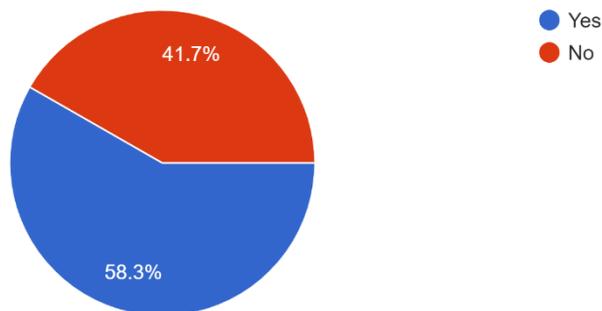


Figure 4.7: Responses on Distribution of children by online class attendance

#### 4.2.8 Distribution by length of parenthood

The objective on time one has been in parenthood, those with 11-20years had 39.7% response rate and 5-10 years parenthood had 35.3% response rate. From the study findings, it was also determined that respondents with 1-5years of parenthood was at 19%, and the rest had minimal responses. The pie chart below explains the distribution of respondents by length of parenthood.

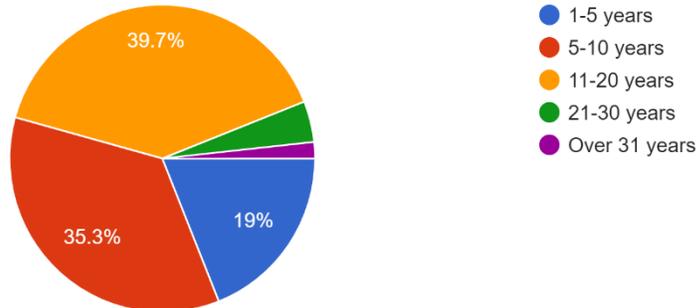


Figure 4.8: Responses on Distribution by length of parenthood

#### 4.3 Distribution by tools and current techniques for child support in remote schooling

Research findings on the tools and techniques mostly available for a child's remote schooling, it was discovered that pupils studied mainly through computer hardware such as tabs, laptops, and desktops at a rate of 57.8%, followed by smartphones at a rate of 46.8%. Social media was also widely used at a rate of 41% for WhatsApp while and Facebook and Instagram both rated at 34.9%. results also indicated that radio and television medium had the lowest rating 14.7% and 30.3% respectively.

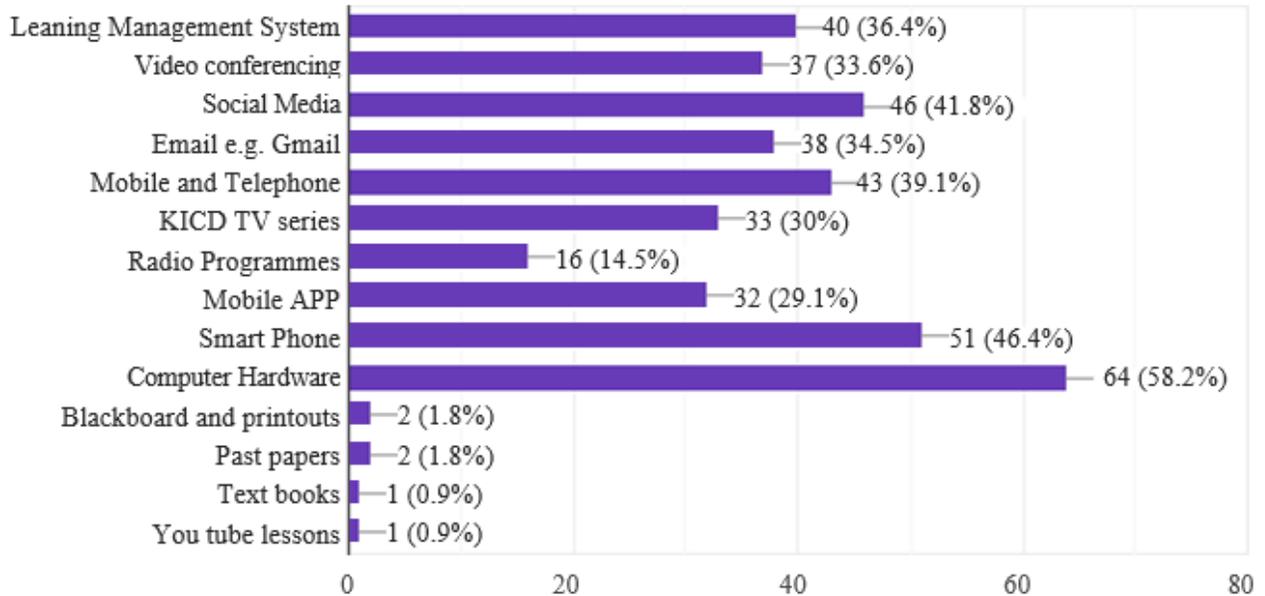


Figure 4.9: Responses on tools and current techniques for child support in remote schooling

#### 4.4 Challenges experienced in remote schooling

Out of those who had remote learning programs for their children, it was determined that parental assistance with technology for remote learning was a major challenge at 55.5% response rate while the financial implication of catering for the technology tools as a challenge had 51.8% response rate. Challenges of unavailability of technology and extra cost of feeding the students while at home were at 37.3% and 26.4% response rate, respectively. Lack of reliable and stable power was a minor challenge at 0.9% response rate.

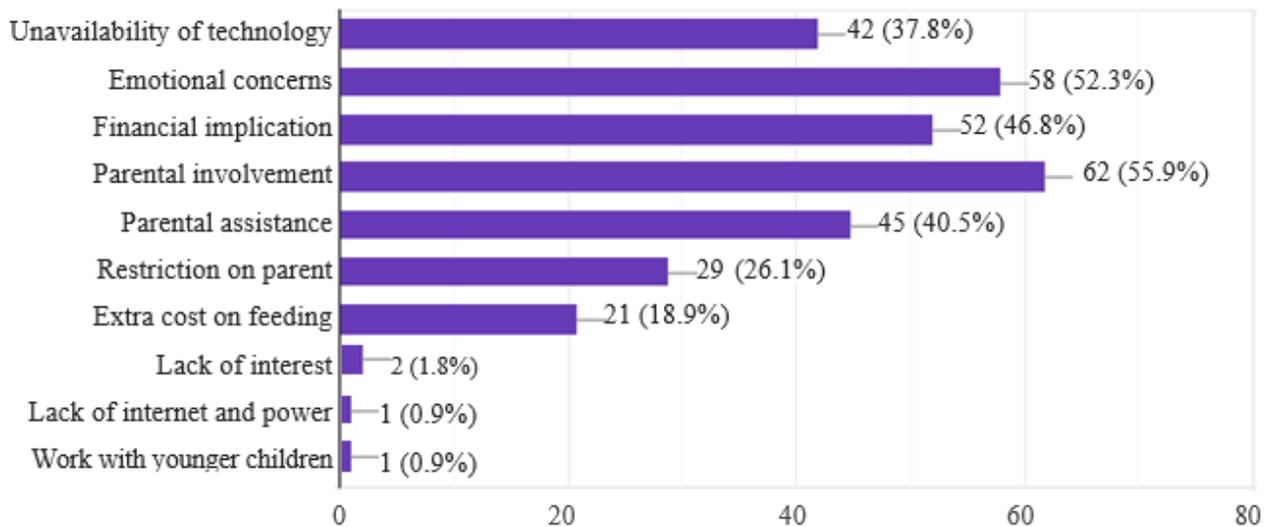


Figure 4.10: Responses on Challenges experienced in remote Schooling

**4.5 Distribution by benefits of remote schooling**

One of the research objectives was to determine the benefits of remote schooling, and from the findings, it was observed that 75% of the respondents noted that its parents and their children bond. Furthermore, it was found that 65.7% of the respondents felt that homeschooling enables parents to monitor the quality of education of their children, whereas 62% of the respondents indicated that it provides an opportunity to parents to assist their children during adolescence. Cutting the cost of child’s schooling received a 60.2% response rate, and 33.3% of respondents indicated that it offers a flexible learning schedule.

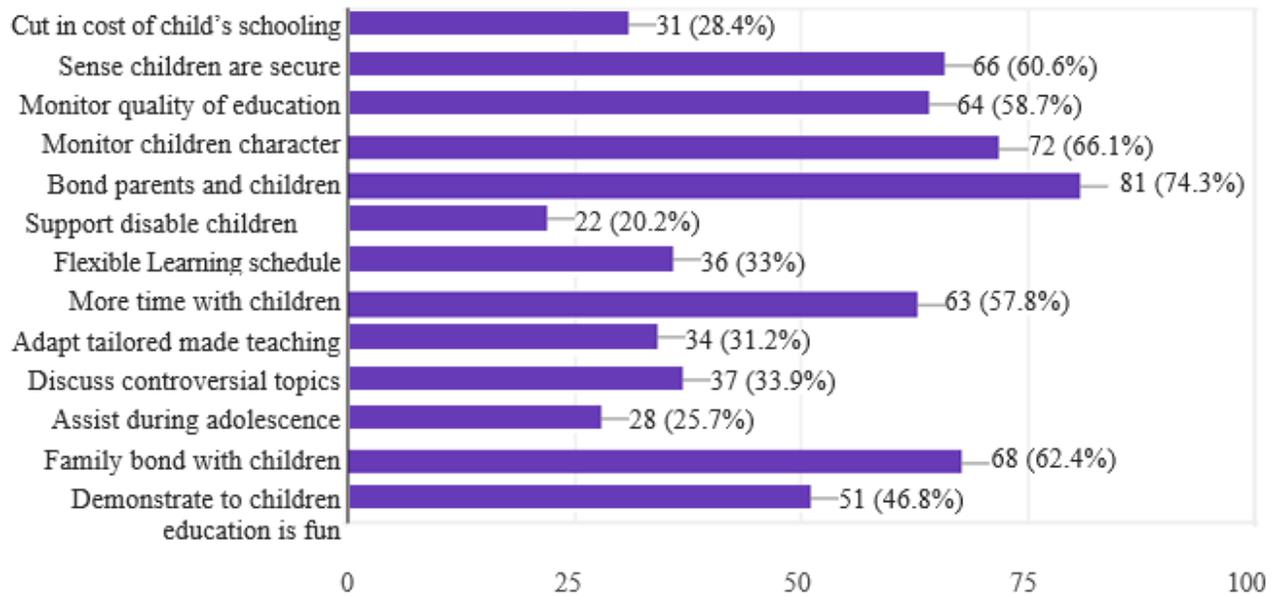


Figure 4.11: Responses on the benefits of remote schooling

**4.6 Factors affecting support in remote learning**

Another objective was to determine factors that affect remote learning. From the findings, it was established that 60.2% indicated they were not teachers, while the lack of infrastructure resources was at a 52.8% response rate. It was also noted from the study observations that lack of parents’ training in education was a factor affecting homeschooling at a 45.4% response rate, and 44.4% of the respondents noted they would restrain anger and remain patient. The other minor factors found from the study were peer pressure, spending large amounts of money on books and tight work schedules as illustrated by the graph below.

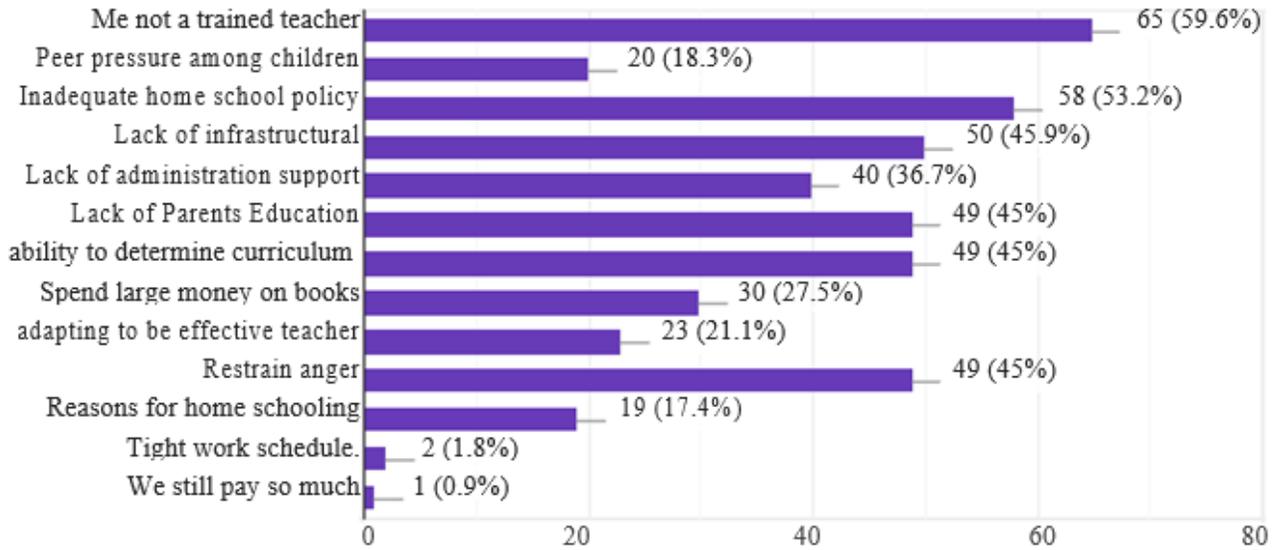


Figure 4.12: Responses on the Factors affecting support in remote learning

#### 4.7 Recommendation status by parents on homeschooling

On whether to recommend remote schooling for implementation by all parents and schools, the majority of the respondents at 39.8% would recommend while 24.8% of the respondents would not recommend it. The remaining respondents at 35.4% were not sure whether to recommend or not.

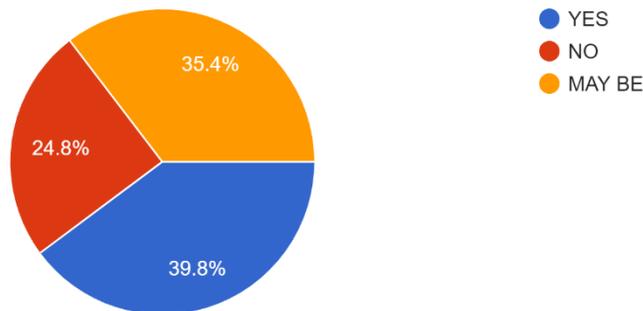


Figure 4.13: Responses on Recommendation status by parents on home schooling

### **5.1 Discussion**

The challenges that parents face when using online schooling were from the findings; parental assistance with technology was indicated as a challenge at 55.5%, financial implications of catering for tools at 51.8%, while lack of power had the least response rate at 0.9%. From the findings, there is a clear determination that most parents are not IT compliant, and finances also hinder online schooling, this was supported by [2]. The results revealed that parents were moderately satisfied with the computer competence of teachers and highly satisfied with the computer competence of students. It can be deduced from the responses that online schooling has benefits that include helping parents and children bond at 75% response rate, helps parents to monitor the education of their children at 65.7% response rate, and parents having an opportunity to assist their children during adolescence at 62%. That it creates, a flexible learning schedule was responded to as least of benefits at 20.4% this was supported by the rapid evidence assessment on remote learning was carried out by [10] to respond quickly to policy challenges of remote learning during school closure due to COVID 19. For the last objective of the study the respondents were required to state factors that affect their support towards remote learning for children as suggested by [10]. From the study observations, 60.2% response rate indicated that most parents are not teachers, and they also lack infrastructural resources to support online schooling. The tight work schedule of parents did not feature as a strong factor that inhibited remote learning. Lastly, on whether to recommend implementation of online schooling, 39.8% indicated they would recommend while 24.8% of the respondents noted they would not and 35.4% were not sure whether to recommend or not. This may be taken to mean that online schooling is embraced by the majority of parents, while challenges that they face would have guided those who failed to recommend it.

### **5.2 Limitation**

A major limitation of this study is the use of online survey in place of face to face interviews and surveys. This method might have introduced bias from the participants which affects the analysis and interpretation of results. There was no way to determine if the selected participants filled the forms themselves, and this restricted the ability to find out how true their answers were as any random family member might have filled the forms instead.

### **5.3 Conclusion**

Based on the research findings, it can be concluded that many people may easily accept online schooling. It will prove beneficial to both learners and parents. Parents can easily mitigate the challenges and address the factors that prohibit them from effectively utilizing online learning for their children of government to address some issues. From the study findings, it would save parents money, avail an opportunity for parents to bond with their children, and make it easy for parents to monitor education for their children.

#### **5.4 Recommendations**

From the study findings, it is clear that online schooling would easily be accepted by many parents owing to its many benefits that parents would derive. It is therefore recommended that the government of Kenya to could address factors that would otherwise hinder effective remote schooling, which includes; provision of electricity to areas that do not have and meeting the cost of internet connectivity. It is also recommended that the government and educational practitioners in Kenya can officially develop a working curriculum and system for remote schooling. The system would help minimize effects of emergencies that otherwise lead to school closures as it happened during the COVID 19 pandemic in Kenya, which would otherwise have not been felt if remote schooling had been launched across the country.

#### **References**

- [1] Alcena, F. M. (2014). Parental involvement and its impact on student achievement In Florida virtual school. *Distance Learning*, 11(2), 25.
- [2] Asma Khaleel Abdallah.(2018). Parents Perception Of E-Learning In Abu Dhabi Schools In United Arab Emirates. *IJASOS- International E-Journal of Advances in Social Sciences*, Vol. IV, Issue 10, April 2018.
- [3] Ball, K., and Lamb, S.(1999).Senior secondary curriculum choice and entry into post vocational education and training. Paper presented at the AVETRA conference.
- [4] Bernard Robert M, Abrami Philip C, Borokhovski Eugene, Wade C Anne, Tamim Rana M, Surkes Michael A, and Bethel Edward Clement. (2009). A Meta-Analysis of Three Types of Interaction Treatments in Distance Education. *REVIEW OF EDUCATIONAL RESEARCH*, 79(3), pp.1243-1289.
- [5] Best John Hardin (1983) *Historical inquiry in education: A research agenda* (American Educational Research Association, 1983); The most comprehensive overview of the historiography of American education, with essays by 13 scholars. DOI <https://doi.org/10.3102/0013189X012006003>
- [6] Beth Tarasawa (2020). COVID-19 school closures could have a devastating impact on student achievement.. <https://www.nwea.org/blog/2020/covid-19-school-closures-could-have-devastating-impact-student-achievement/>
- [7] Borokhovski Eugene, Tamim Rana, Bernard Robert M, Abrami Philip C, and Sokolovskaya Anna. (2012). Are contextual and designed student-student interaction treatments equally effective in distance education?. *DISTANCE EDUCATION*, 33(3), pp.311-329.
- [8] Braun, V. and Clarke, V. and (2013) *Successful qualitative research: A practical guide for beginners*. London: Sage. ISBN 9781847875815 We recommend you cite the published version. The publisher's URL is <http://www.uk.sagepub.com/books/Book233059>

- [9] Cullinane, C., & Montacute, R. (2020). COVID-19 and Social Mobility Impact Brief #1: School Shutdown. *Sutton Trust*, 1-11.
- [10] Davis, Fred, Bagozzi, Richard and Warshaw, Paul,(1989) User Acceptance of Computer Technology: A Comparison of Two Theoretical Models VL - 35,DIO <https://doi.org/10.2307/249008>. Management Science
- [11] Education Endowment Foundation (2020) Remote Learning, Rapid Evidence Assessment, London: Education Endowment Foundation.
- [12] Franklin, O. T., Burdette, P., East, B., & Mellard, D. F. (2015). Practices and Challenges in Online Instruction for Students with Disabilities: State Education Agency Forum Proceedings Series (Report No. 2). Topic 2 Summary: Parents' Roles in their Child's Online Learning Experience. *OSEP AND COLSD FORUM*.
- [13] Harris Cooper, Barbara Nye, Kelly Charlton, James Lindsay and Scott Greathouse. (1996). The Effects of Summer Vacation on Achievement Test Scores: A Narrative and Meta-Analytic Review *Review of Educational Research. American Educational Research Association*. 66(3), 227-268
- [14] <https://www.pd.co.ke/news/exams-will-go-on-as-scheduled-president-uhuru-assures-33991/>
- [15] Kenya Institute of curriculum development (2011) Report on Summative Evaluation of the Secondary Education Curriculum.
- [16] Liu, F., Black, E., Algina, J., Cavanaugh, C., & Dawson, K. (2010). The Validation of One Parental Involvement Measurement in Virtual Schooling. *Journal of interactive online learning*, 9(2).
- [17] Ministry of Education Science and technology; Kenya Education Sector support programme 2005 – 2010. Delivering Quality Education and KCSE regulations for the Kenya Certificate of secondary education 2012 – 2013
- [18] Republic of Kenya (1999). Report on the Commission of Inquiry into the Education System of Kenya. Nairobi: Government Printers.
- [19] Rogers, E.M. (1995) Diffusion of Innovations. 4th Edition, the Free Press, New York.
- [20] Uhuru orders schools to be closed to curb coronavirus spread <https://www.standardmedia.co.ke/article/2001364357/uhuru-orders-schools-to-be-closed-to-curb-coronavirus-spread>