Parental Engagement in the Development of Critical Thinking Skills in Grade Six learners in Public Primary School of Bondo Sub-County, Siaya County- Kenya

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Abstract: *This study investigated the influence of parenting engagement (PE) on the development of Critical thinking Skills (CTs) in grade six learners in public primary schools of Bondo Sub-County. It was guided by the research question; how does parenting style influence the development of critical thinking skills in grade six learners? The study used convergent parallel mixed design where quantitative data was collected using correlational design and qualitative phenomenological design. It was anchored on Joyce Epstein's theory of overlapping spheres of influence. A total of 130 public primary schools in Bondo, 130 Head teachers, 130 Class teachers, 5978 grade six learners and 5978 parents were the target population. Probability and non-Probability sampling techniques inclusive of clustered, purposive and simple random techniques were used to obtain a sample size of; 26 public primary schools, 26 class teachers, 6 Head teachers, 104 learners and 42 parents. Questionnaires were used to collect data from class teachers and the learners, Semi-structured interviews for Head Teachers and Focus group discussion for the parents. . Validity of questionnaires was determined by the use of content validity and Cronbach's alpha calculated from pre-test data provided a value of 0.74 and it was accepted as indicating strong validity. Reliability of qualitative instruments was determined by member checking, triangulation and peer review. Data from the questionnaires were coded and analyzed using descriptive and inferential statistical analysis aided by statistical package for social sciences version 29. Qualitative data were thematically analyzed. Multiple regressions were used to test the hypothesis and revealed that authoritative parenting with a p-value of 0.0001 has positive influence on the development of CTs. The results also showed that slightly above 50% of the learners were getting the right parenting attention, class teachers supported authoritative parenting with a mean of 3.00 and Standard deviation of 0.90. 80% of Head Teacher supported authoritative parenting as good for CTs development and most parents were not sure of suitable parenting style for development of CTs. The study recommended that Ministry of Education to rigorous run parenting empowerment programs, the Head Teachers to induct parents on best parenting styles and best practices that promote CTs in the children, Class teachers to give clear guidance on how parents are to assist with take-home assignments and parents to use online platforms to share on best parenting style that promote CTs in their children.*

Key words: *Parental Engagement, Parenting Styles, Critical Thinking Skills, grade six learners*

1.1 Background of the Study

Parental engagement (PE) has been viewed as the way of involving the parents into the activities and assessment of the progress and development of the learners and it refers to the amount of participation a parent commits to the learning of his or her children (Bartolome, 2017). It also means caregiver of children becoming involved in their children's learning, both in and out of school which encompasses; reading to their children, supervising homework, discussing children's progress with the teachers, help school set challenging academic goals and advocating for better education in their communities (Mwase, 2020). In Kenyan education system PE refers to the active collaboration of parents with teachers and other stakeholders in their children's learning process and holistic development (ROK, 2023). The recognition of Parents as active collaborators in the educational process of their children affirms their importance in creating ideal environment for their children to successfully acquire skills, knowledge and values.

The definition of critical thinking (CT) that is universally accepted has been elusive, however its importance and prominence in the educational circle has gained much prominence (Giacomazzi et al., 2022). It is a term used to encompass skills such as applying, analyzing, synthesizing, and evaluating information and the ability to use them (Diane, 2001). In the new Competency Based Curriculum (CBC) in Kenya CT and problem solving are taken as one competency. It involves evidence based logical reasoning to arrive at conclusions that avoids rigid recall and regurgitation of information. In this way, it promotes exploration of new ways of doing things, open-mindedness, autonomy and life-long learning in the learner (K.I.C.D, 2017). We therefore in this research can define CTs as the cognitive disposition and ability to ask questions, solve problems, think creatively, communicate effectively and demonstrate a sense of autonomy that promotes self-regulation and responsibility over one's life.

In 2017, the Government of Kenya introduced the CBC with its' fifth guiding principle parental empowerment and engagement (PE&E). The aim of the guideline is to enhance parents' role in helping their children develop the 7 core competencies; communication and collaboration, Critical thinking and problem solving, creativity and imagination, citizenship, digital literacy, learning to learn, and finally, self-sufficiency (KICD, 2019). The role of the parents is prominently outlined as essential in influencing the development of the competencies of which CTs is one of them. One of the motivating factors for the introduction of the new curriculum was the need to develop learners who have skills that would help in the society (Akala, 2021). It was in line with the global restructuring of curriculum to embrace what many experts refer to as 21ST Century skills among which are numbered competencies such as problem solving, collaboration, critical thinking, and communication Care et al., (2018) of which a number of experts singled out Critical thinking and problem solving skills as fundamental for success in life and the job market (Li, 2022).

In this study focus was made on how PE influences the development of CTs in grade six learners. These are mostly 11 year olds at the final year of primary school before transitioning to junior school after successful national examination (K.I.C.D, 2017). According to Piaget's cognitive development theory, they are at the end of concrete operational stage or the threshold of formal operational stage (Kazi & Galanaki, 2020) and should be able to manifest abilities to think logically, think abstractly, reason and apply knowledge in solving problems (Sanghvi, 2020). It is worth investigating how parenting style help them develop CTs.

Some studies have shown the connection between parenting and the development of CTs. In Turkey, a study on PE and the development of Problem solving skill (PSS) among high school learners was carried out and Authoritative attitude of mothers was found to positively enhance the problem solving skills of the learners and that children were more successful in school due to regular and meaningful parental interest (Tösten et al., 2017). Authoritative attitude sets standard expected of the child while at the same time gives room for discussion of their unique needs. While in Uzbekistan an investigation on the formation of Critical and Creative thinking in first grade learners looked at the role of both teachers and parents. Family role was found to be fundamental in creating stimulating environment at home, encouraging children to ask questions and discuss various situations, develop the child's observational and analytical skills, organize family reading and educational tours as well as collaborate with schools to develop these skills (Utaeva, 2023). The parent's attention in encouraging the curiosity of the child while intentionally involving them in discussions stimulates their cognitive abilities aligned to CTs. However, not all the parents had embraced the authoritative approach nor had the time to create stimulating environment at home for that supports the emergence of CTs.

A study in Nigeria on influence of parenting styles on the lifestyles of secondary school learners targeted 1,273 learners and 120 teachers from 31 secondary schools. Using descriptive survey design and collecting data by use of questionnaires. The null hypothesis was tested and it revealed that democratic, autocratic, and laissez-faire leadership styles influence the lifestyle of the learners to a great extent. It was recommended that parents adopt democratic leadership style to promote creative thinking and positive attitudes towards education of their children (Asiamah, 2013). A deeper study is needed to test the relationship between CTs and parenting style. In addition, the study can be enriched by qualitative data from parents in relation to their roles as co-educators of CTs. In Ghana, a research using descriptive survey design focused on dominant parenting style on academic performance of 252 final year junior school learners. Document analysis of the leaners' end year examination result was also done. The findings reveals that there is a correlation between parenting style and academic performance of the learners and that learners from authoritative parenting performed better in academics than those from authoritarian, permissive and neglectful parenting style. In addition, learners from neglectful parenting homes demonstrated low performance (Appiah, 2022). These findings leave room for a study on influence of authoritative parenting in promoting questioning, creativity, communication and autonomy in grade six learners in Bondo Sub-County.

In Kenya, a study on education and Parenting looked at school systems, parent behavior and academic achievements. The parental involvement, expectations and supportiveness is related to successful academic outcomes for learners (Lansford & Sorbring, 2019). The literature only mentions in general the need for warm supportive parenting for success in education leaving room for further empirical studies. According to Ajuoga, (2021) after review of extant literature on PE in the implementation of CBC found that some parenting approach of doing homework for their children was putting at risk the development of CTs . A study in Vihiga found poor PE in take-home assignments of grade 4 learners due to poor communication with school, negative attitudes and most informative, diverse parenting styles (Dingili & Yungungu, 2023). Finally in Homa Bay, 91% of E.C.D teachers perceived that learner from authoritarian parents were unable to express themselves due to limited communication between them and their parents (Amollo & Lilian, 2018).

1.1 Statement of the Problem

Parental engagement is crucial for the holistic development of learners, particularly in fostering critical thinking skills (Magwa & Mugari, 2017). However, Studies have shown that parents often struggle to promote critical thinking (CT) in their children in several countries, including the USA, the Philippines, and Sub-Saharan Africa (Murphy et al., 2014; Bartolome, 2017; Camilli & Giacomazzi, 2022) in terms proper definition of CTs, the right pedagogies and creating a stimulating home environment for development of CTs. The problem persists in Kenya, where despite the Government efforts to recognize and normalize Parental Empowerment and Engagement (PE&E), stakeholders are still concerned about the contribution of PE to the development of CTs among learners in Primary schools. Researches has confirmed these concerns (Amollo & Lilian, 2018; Amunga et al., 2020; Orina,2020; Ajuoga, 2021; Omariba, 2022; Syomwene, 2022; Dingili & Yungungu, 2023). Authoritarian parenting has been found to stifle growth of communication skill among ECD learners. Parents are reluctant to play their role as co-educators of CTs and even miss school meeting meant to plan and discuss leaners' educational progress, parental low literacy and low income are making their children lag behind in acquisition of CTs, parents use wrong strategies in supporting the take-home assignments of their children which threatens the emergence of problem-solving skill, creative thinking autonomy and communication among the learner. Some parents lack proper grasp of the principles of CBC that may in turn impact negatively the development of questioning skill, creativity and problem-solving, autonomy and effective communication which are manifestations of CTs. These studies did not particularly focus on the contribution of Parenting style, parent-teacher collaboration and parents' support of learning at home to the development of CTs among the learners in Bondo. This gap motivated this study to find out how the factors mentioned affects the development of CTs in the targeted learners in order to help parents be better co-educators in helping their grade six children acquire the competency of CTs.

1.2 Research Question

How does Parenting styles influence the development of Critical thinking skills in grade six learners in public primary schools of Bondo Sub-County?

1.3 Theoretical Framework

Joyce Epstein's Theory of Overlapping Spheres of Influence was the main anchor of this research. It examines the interconnectedness and collaborative relationships between families, schools, and the community in order to foster greater cohesion among them in support of the learning outcomes of learners (Yamauchi et al., 2017). The theory was developed as a way of complementing Epstein's typology of parental involvement which has six essential forms, namely; parenting, volunteering, learning at home, collaborating with the community, decision making, and communicating (Epstein Joyce, 2007). It provided the framework of understanding the nature of PE in the development of CTs in grade six learners. Epstein's theory proposes that learners benefit significantly when parents, educators, and community members collaborate to guide and support their learning and overall growth. Within this model, three distinct environments—home, school, and community—converge, exerting individual and combined impacts on children. The theory of overlapping spheres of influence broadens the narrow notion of PE beyond the actions of individual parents. Instead, it offers a more comprehensive and realistic portrayal of how learners continually navigate multiple environments and how the influential individuals in those settings can collaborate to enhance learner's education and development (Yamauchi et al., 2017). In this study, it looked specifically how parenting which encompasses, parenting style as

well as best practices initiated by parents at home influences the development of critical thinking skills in grade six learners.

1.4 Review of Related Literature
Parental styles and the Development of Critical Thinking Skills in Grade Six Learners

According to (Epstein, 1997) parenting includes embracing best parenting styles that will optimize the learning outcome for children in different stages of learning among other best practices at home. According to (Baumrind, 1966) there are four types of parenting styles, namely, authoritative, authoritarian, permissive and neglectful parenting. Authoritative parents are classified as both demanding on what they expect of their children and responsive to their needs as well. The authoritarian parents are demanding on what they expect from their children but are not responsive to their individual needs. The permissive parents are highly responsive to the needs of their children and are less demanding, while neglectful parents are neither demanding nor responsive to the needs of their children (Ulferts, 2020).

A study in France on why parenting matters for children reviewing secondary literature found that warm parenting supports healthy development for children, including cognitive development where CTs is found (Ulferts, 2020). In China, a study on parenting style influence in CTs and Critical thinking disposition using cross-sectional design studied 245 grades five learners concluded that authoritative parents encouraged children to think independently by providing experiences to help children develop CT (Deng et al., 2023). The two studies concur on the positive influence of warm or authoritative parenting in the development of CTs. The parents' habit of providing thought provoking experiences to their children is therefore deemed crucial and must be encouraged. The study focuses on review of secondary literature in general, however, literature on the same is still minimal within Kenya, while empirical studies among grade six learners is yet to be done. This leaves a gap to be filled by this study.

In Turkey, a study on impact of parenting attitudes on Problem solving skills (PSS) in high school learners used a relational survey model to collect quantitative data from 326 learners. The learners were randomly selected. The analyzed data revealed that there's a positive medium level relationship between authoritative (democratic) attitudes of parents and learners' PSS and that parental attitudes predicted 20% of the learners' PSS (Tösten et al., 2017). The sample of learners arrived at through random selection allows for the generalization of the findings that democratic parental attitude supports the development of PSS which is an aspect of CTs. However, the study left out the teachers and parents whose opinions could help validate the data from learners through triangulation. This study filled that gap by collecting and analyzing data from Head teachers, class teachers as well as parents.

A research in Iran looked at parenting styles and its influence on academic achievements among grade 6 adolescent girls. The population for study included; 341 girls, 341 mothers and 20 teachers arrived at through cluster and multistage sampling. The findings showed that authoritative parenting accounted for 36% of variance of academic achievement and it positively related to academic achievement. Authoritarian and permissive PE was non-significant. This study was focused on how PE helps the learners to develop self-regulated learning as a means to academic success (Amani et al., 2020). The study confirms the influence of parenting styles on general academic success of adolescent girls only. It further reinforces capacity for self-regulation or autonomy as a major demonstration of CTs. However, focusing on female learners alone as well as the use of quantitative data may limit the generalizability of

the findings. Inclusion of male learners as well as qualitative data may give additional insight on how PE influences self-regulative abilities of their children.

In Ghana, research done using descriptive survey design focused on dominant parenting style on academic performance of 252 final year junior school learners. Document analysis of the leaners' end year examination result was also done. The findings reveals that there is a correlation between parenting style and academic performance of the learners and that learners from authoritative parenting performed better in academics than those from authoritarian, permissive and neglectful parenting style. In addition, learners from neglectful parenting homes demonstrated low performance (Appiah, 2022). A second study in Ghana collected data from 376 senior high school learners found through use of Pearson's correlation coefficient matrix that authoritative parenting style had greatest positive impact on academic performance of learners, while neglectful parenting had significant negative impact on academic performance (Boateng et al., 2021). The two studies have looked at academics performance in general while targeting junior and senior high school learners. While this study has confirmed authoritative parenting as beneficial for academic results of high school students, its influence on promoting questioning, creativity, communication and autonomy in grade six learners was not touched, which gave credence to the carrying out of this study.

A study in Nigeria on influence of parenting styles on the lifestyles of secondary school learners targeted 1,273 learners and 120 teachers from 31 secondary schools. Using descriptive survey design and collecting data by use of questionnaires. The null hypothesis was tested and it revealed that democratic, autocratic, and laissez-faire leadership styles influences the lifestyle of the learners to a great extent. It was recommended that parents adopt democratic leadership style to promote creative thinking and positive attitudes towards education of their children (Asiamah, 2013). A deeper study is needed to test the relationship between CTs and parenting style. In addition, the study can be enriched by qualitative data from parents in relation to their roles as co-educators of CTs.

In Mauritius, a study on discipline in relation to success in education was done. Focused group discussions for teachers, parents and learners were carried out for each group. Content analysis of the discussions revealed that some indiscipline originate from family factors, one of which is parenting style. Authoritarian, permissive and neglectful parenting to a certain extent influenced indiscipline in some learners which was detrimental to academic achievement (Jinot, 2018). The research while connecting parenting styles with discipline which is fundamental for academic success did not discuss clearly the connection between discipline and Critical thinking. The connection, however, can be inferred as a disciplined learner may have the capacity to critical analyze a situation and hence make better decisions beneficial to the academic progress.

In Kenya, a study on education and Parenting looked at school systems, parent behavior and academic achievements. While there is increased access to education, variance still exists in quality based on socio-economic, geographical location and PE. The parental involvement, expectations and supportiveness is related to successful academic outcomes for learners (Lansford & Sorbring, 2019). The literature review in this study only mentions in general the need for warm supportive parenting for success in education leaving room for further empirical studies. Another study on the impact of parental coaching skills on social behavior of children used case study methodology targeting parents, learners between 14 years to 17 years and the teachers. Interviews were used to collect data. Parents coaching skills were found to

range from telling, accountability, modeling, authority and use of their own history. The study recommends going beyond telling to use of dialogue and allowing room for co-created solutions (Sihanya, 2023). The research reveals the connection between authoritative parental style that embraces dialogue, accountability and responsiveness and acceptable social behavior. The process also points to development of cognitive skills such as communications and problem solving which is part of CTs. However, not all parents had embraced this model and CTs as a byproduct of this coaching is only inferred, therefore requiring further investigation.

In Kirinyaga, factors influencing secondary learners' performance in national examination were investigated. One of the factors was found to be family background. The descriptive survey design collected data from 136 respondents, that is; 68 heads of departments, 34 Dean of studies and 34 school captains from 34 schools. 86.7% of the respondents agreed that family background which includes, parenting style influence academic performance (Luketero & Kangangi, 2019). However, parents as direct respondents were never included in the study. In addition, the isolation of parenting style as a fundamental factor in the development of CTs needs a deeper investigation where both parents and learners in primary schools are brought on board.

In Western Kenya, group-based parenting as a mechanism of promoting child development was done. The outcome points to the fact that the child's cognitive and language development required parental stimulations. This research revealed deficient parenting and recommended the used of trained community health experts to help parents acquire the right parenting skills for ECD going learners (Luoto et al., 2021). This research looked at contribution from health perspective and how parenting impacts cognitive skills and language development leaving room for a research from educational psychology perspective.

In Homabay, a research was done on authoritarian parenting communication and its effect in the learners' participation in ECD science class. 314 persons were the target population and included; County Education Officers, Head Teachers, ECE Teachers, learners and parents as respondents. The teachers' questionnaires were the main data collection tool. 91% of the ECE Teachers concurred that learners with authoritarian parents were unable to express themselves due to limited communication between the learners and the parents (Amollo & Lilian, 2018). This study confirms the detrimental effect of authoritarian communication on the child's acquisition of communication skills. It opens a window for a further investigation on how parenting styles may be effecting the development of CTs in older learners where qualitative and quantitative data from learners and parents are also analyzed. The above empirical review of literatures points to a relationship between parenting, specifically parenting styles on the educational out comes of their children. However, a research gap remain that can be filled by a research design that will gather qualitative and quantitative data from all key respondents for thorough analysis of the relationship between Parenting style and the development of CTs in grade six learners.

1.5 Methodology
This study used mixed-methods approach of convergent parallel design. It combined both the quantitative and qualitative research methodologies where qualitative and quantitative data were collected and analyzed to gain deeper understanding of research questions (Delaney, &Beecham, 2017). According to Creswell, (2018) this design can be used to mitigate the weakness in either qualitative or quantitative design. The quantitative data collection and analysis was guided by correlational research

design as it helped to examine the relationship between PE and the development of CTs in grade six learners. The qualitative data collection and analysis was guided by phenomenological design as it enabled the researcher to capture the views and experiences of the respondents by use of semi-structured interviews and focus group discussions. The target population included all the 130 public primary schools in Bondo Sub-County, 130 Head teachers, 130 grade six class teachers, 5978 grade six learners and their parents (MOE Bondo Sub-County, 2024). According to Kothari, (2012) a sample of 10% to 30% can be a true representative of each stratum of cohorts under investigation. This study use 20% of the targeted schools and used clustered sampling of grouping the schools according to the six zones and then used simple random sampling technique to get a total of 26 schools. From the 20% of the selected schools, one class teacher per school was included in the study totaling 26 class teachers. Simple random sampling was used to get one teacher in schools that had more than one stream. 6 Head teachers were purposively selected from each zonal head quarter with the assumption that they had information relevant to the study due to regular hosting of joint head teachers' meeting accounting for 20% of the selected schools. They were involved in semi-structured interview.

Taro Yamane's formula (Khalid, 2021) was used to obtain a sample of the learners;

$$n = \frac{N}{1 + N(e^2)}$$

Where n= the required sample size, N= Total population (5,978 learners) e= the margin of error (0.10) which gives a confidence level of 95% which is still high enough to make the results acceptable (Chanuan et al., 2021). The calculation was done as follows;

$$n = \frac{5978}{1 + 5978(0.10^2)}$$

n= 98.35 rounded off to 98 learners.

Stratified and simple random sampling techniques were used to obtain the 98 learners from the selected 26 schools for the study. The parents were selected by use of purposive sampling technique with the assistance of the school head teachers who were instructed to purposefully invite parents able to engage in fruitful focused group discussions. According to Selvam, (2017) generally 6 to 10 are accepted for a focus group. From this, 6 focus groups were created giving a total of 42 parents representing 7 parents per each of the six educational zones in Bondo. During the implementation of the convergent parallel research design, qualitative data collection involving interviews for Head Teachers and focus group discussions for parents and quantitative data involving use of questionnaires for class teachers and grade six learners were collected and analyzed independently, but were mixed during interpretation of the findings. This allowed for comparison of data collected before making the final presentation (Teddlie, & Tashakkori, 2009). Quantitative data were coded and with the help of SPSS version 29 were analyzed through simple descriptive statistics involving frequencies, percentages, mean and standard deviation. Multiple regressions analysis was used to test the hypothesis whether there is a relationship between parenting style and development of Critical thinking skills in grade six learners. Qualitative data was recorded and thematically analyzed to identify recurring themes which were presented through narratives and direct quotes.

1.6 Findings and Discussions

The study sought the determine the relationship between parenting style and the development of Critical thinking skills in grade six learners in Bondo Sub-County. The quantitative findings from the learners' and class teachers' responses are as shown in Table 1 and 2 respectively.

Table 1: Grade 6 Learners' Responses on Parenting Styles

Parenting styles	Never (1)	Rarely (2)	Sometimes (3)	Often (4)	Always (5)	Mean	SD
3. Your Parents ask you questions about what you learn in school	5.2%	10.4%	26.0%	31.2%	27.1%	3.80	0.92
4. Your Parents encourage you to share your opinions, even if they are different from theirs	7.3%	12.5%	29.2%	28.1%	22.9%	3.58	0.98
5. Your Parents encourage you to find solutions when you are faced with problems	6.3%	15.6%	25.0%	30.2%	22.9%	3.64	0.94
6. Your Parents listen to you carefully when you talk about your school work or other topics	4.2%	10.4%	31.3%	33.3%	20.83%	3.71	0.87

Source; Researcher (2024)

The data from Table 1 offer insight into how Grade 6 learners perceive how parents are engaged in fostering critical thinking skills. While the learners were not asked directly to identify the parenting styles, the questions were design to elicit responses that can give insight into the type of parenting approach the parents of the learners adopt. For the Grade 6 learners, the responses highlight a generally positive but varied experience with parental engagement. Learners reported that parents frequently inquire about their school learning, with a mean score of 3.8. This indicates that most students experience regular discussions about their academic work, though the standard deviation of 0.9 shows some inconsistency in how often this occurs. Encouragement to share differing opinions, with a mean of 3.6, suggests that while many students feel supported in expressing their views, this support is not universally consistent. The variability, reflected in a standard deviation of 1.0, points to differing levels of encouragement across families. When it comes to problem-solving support, learners also reported a moderate level of encouragement, with a mean score of 3.6. This score, alongside a standard deviation of 0.9, indicates that although problem-solving is generally encouraged, the extent of support can vary. Regarding parental listening, with a mean of 3.7, students generally feel that their parents are attentive. However, the standard deviation of 0.9 suggests that this attentiveness is experienced differently among learners.

In terms of percentages, 58% of the learners are often or always asked by their parents about school work, 51% are given chance to share divergent opinion, 53% are urged to solve problems, while 54% are given attention by the parents. While these percentages are good, it also reveals that almost half of the learners are not getting proper parental attention to develop CTs based on parenting style adopted by their parents.

Table 2: Class Teachers' Responses on Parenting Styles

Parenting styles	Strongly Disagree (1)	Disagree (2)	Agree (3)	Strongly Agree (4)	Mean	Standard Deviation
5a. Parents who are strict and open to discussion with their children are more likely to help their children develop critical thinking	8.7%	17.4%	43.5%	30.4%	3.00	0.90
5b. Parents who are strict but NOT open to discussion are more likely to help their children develop critical thinking	26.1%	39.1%	21.7%	13.0%	2.22	1.03
5c. Parents who are Not strict but open to discussion with their children are more likely to help them develop critical thinking	4.3%	13.0%	43.5%	39.1%	3.18	0.87
5d. Parents who are neither strict nor open to discussion with their children are more likely to help them develop critical thinking	39.1%	34.8%	17.4%	8.7%	1.95	1.04

Source; Researcher (2024)

Class teachers' perspectives, as shown in Table 2, reveal their views on various parenting styles. Teachers generally believe that strict but open parenting (mean = 3.0) positively impacts critical thinking skills development, though opinions vary, as indicated by a standard deviation of 0.9. They view strict but closed parenting (mean = 2.2) as less effective, with a high standard deviation of 1.0 reflecting significant disagreement. This suggests that while strictness alone may not be harmful, a lack of open communication is seen as detrimental. Non-strict but open parenting (mean = 3.2) is regarded positively, with a standard deviation of 0.9 showing a consensus that this style is effective. Finally, the least favorable view is held for parenting that is neither strict nor open (mean = 2.0), with a high standard deviation of 1.0 highlighting substantial disagreement. Teachers generally agree that the absence of both structure and open communication is ineffective in developing critical thinking. On percentages, 74% of the teachers either agreed or strongly agreed that authoritative parenting is the best in supporting the growth of CTs in the learners. Authoritarian scored at 35% acknowledging the need for structure but deploring the absence of room for discussions. According to (Bartolome, 2017) confrontational and strict parenting limits creativity and communication abilities of the children thereby supporting the low scores of this study.

From the head teachers' interview the collected data presents a clear picture of the relationship between parenting and critical thinking skills. 80% of the head teachers pointed out that the authoritative parenting style is most advantageous in the cognitive development- critical thinking. They have postulated that the high rigor, factored together with good communication and positive reinforcement serves to facilitate the environment that nurture problem solving and autonomy. One head teacher noted, *'Authoritative parenting enables learners to be at ease when expressing their emotions and this makes critical thinking possible because the learners can come up with solutions and make mistakes without repercussions.'* (HT4, interview,7thAugust 2024). A similar opinion is also echoed by another head teacher in his own words where he said that *'authoritative parenting is the right balance between being too harsh and being too lenient which shapes the learners to be critical thinker'* (HT2, Interview, 6th August 2024). This

shows a convergence of quantitative data and the qualitative data obtained from the Head teachers. But only 20% of the head teachers agreed to the authoritarian style as having positive impact in the development of critical thinking. This data aligns with 35% of the class teachers who also chose authoritarian parenting. However, this style was often discouraged as it is characterized by strictness, low responsiveness and it is generally deemed as stifling as it discourages originality and critical analysis which supports Amollo & Lilian, (2018) to the effect that authoritarian parenting stifles expression and communication abilities of children. The head teachers who endorsed the lenient or permissive style as it allows for discussion rejected its effectiveness in the long run due to the absence of instructional direction. The researcher noted that none of the head teachers support the idea of negligent parenting as it lacked the provision of guidance and accountability essential for growth of autonomy, effective communication and problem-solving skills.

The group discussions with parents provided rather diverse picture of critical thinking and how different approaches to parenting support or hinder this kind of thinking. The parents, who said they practiced the authoritative type of parenting without technically naming it, said that they discipline the children but encourage them at the same time. But, a significant number of them confessed that they were not sure on how such practices promoted critical thinking. For example, one parent said the following:-

> *'I think one of the most overused phrases in the early childhood education is that you should always encourage and support your child with warmth and structure but sometimes, as a parent, I get a little lost between teaching my child how to think for himself intelligently or how to follow instructions.'*(Parent 1, FGD6, 8th August 2024).

It showed lack of assessment skills on the part of the parents on the effectiveness of the practices that some of them had been exposed to when it comes to the development of CTs. Regarding this, the parents who had tendencies towards autocratic parenting style identified respect and discipline as the aspects of good thinking skills. However, some began to doubt whether their style of management allowed for enough thinking on one's own.

One parent reflected, *'In our home we teach our child respect and discipline and I agree with that, but after listening to other parents, I understand that maybe my child is not thinking enough for themselves'*. (Parent 3,FGD3,7th August 2024). This in turn elicited a good number of other parents to express the same feelings of concern on how much liberty students should be granted and how much authority should be exercised. It means therefore that both the learners, class teachers, head teachers and parents had reservations on the effectiveness of authoritarian parenting on the development of CTs. Some parents thought that they are training their children on how to be independent through allowing them to make the choices on their own which went hand in hand with what they called reasoning. However, as the conversations continued some parents began to question if they were providing enough structure through their actions to alter their children's decision-making paradigms. One parent shared,

> *'I allow my child to have a lot of input regarding matters that they are involved in as a way of fostering their independence but as I listen to others talk about structure, maybe I should be more rigid on how we approach things.'* (Parent 4, FGD5, 8th August 2024)

In conclusion, both quantitative and qualitative data agrees that CTs development in the learner is best supported by parenting that demands structure while giving room for discussions between parents and the learners. This resonates according to Boateng et al., (2021) with Authoritative parenting style that promotes autonomy and healthy critical thinking habits.

While the parents are not clear on the type of parenting style there are embracing, the discussion settled on a parenting that has structure and open to discussion on matters affecting their children. This converges with the opinion of the class teachers, learners and the head teachers that authoritative parenting is more supportive in helping the learners develop communicative abilities, creativity, autonomy and problem-solving abilities which are indicatives of CTs. However, not all the parents had embraced the authoritative style of parenting. This came out clearly in their discussions and supported by the Head teachers interviews who lamented the inconsistent support from the parents. This finding is further supported by the quantitative data that revealed only slightly above 50% of the students were enjoying the attention of authoritative parenting.

The research had the null hypothesis as follows;

Ho: There is no significant relationship between parenting styles and the development of Critical thinking skills in grade six learners of Bondo Sub-County

Inferential statistics in the form of multiple regressions was used to test the hypothesis as shown in the table below

Table 3: Multiple Regression table on parental styles

Predictor Variable	Coefficient (β)	Standard Error	t-value	p-value
Intercept	3.10	0.70	4.43	0.0001
Authoritative Parenting	1.35	0.25	5.40	0.0001
Authoritarian Parenting	-0.20	0.30	-0.67	0.505
Permissive Parenting	0.05	0.28	0.18	0.857
Neglectful Parenting	-0.10	0.32	-0.31	0.757

Source; Researcher (2024)

Taking the accepted significance level of 0.05 according to the findings of the analysis, it can be concluded that authoritative parenting enhances critical thinking by a coefficient of 1. 35 (t-value = 5. 40, p-value = 0.00001). The positive p-value of 0.0001 and less than the significance level of 0.05, suggests that the learner in an authoritative background that is, high standard and plenty of support exhibits better critical thinking skills. CTs increases with the increase of Authoritative parenting and decreases with the decrease of authoritative parenting. This finding is in line with what head teachers and classroom teachers said that authoritative parenting creates an environment that is conducive for the cognitive development (Class Teacher Survey 2024; Head teacher Interview 2024). The null hypothesis is hence rejected with reference to authoritative parenting, and the alternative hypothesis is hence adopted, that there is a significant relationship between authoritative parenting and the development of critical thinking skills in grade six learners in Bondo Sub-County.

1.8 Conclusions and Recommendations

 The study concluded that authoritative parenting that has structure and room for discussion is beneficial for the development of Critical thinking skills in the learners. It offers the conducive environment for asking questions, developing creativity and problem-solving skills, emergence of autonomy and effective

communication which are manifestations of CTs. However, the confusion among the parents about the right parenting style to be embraced and the statistics pointing to almost half of the learners to getting the right parenting requires interventions.

The possible mitigations measures could include; The Government through the Ministry of Education to strengthen programs aimed at empowering parents in their role as co-educators under the Competency Based Curriculum (CBC), Head teachers initiating induction programs for parents on parenting styles and best practices at home that can promote the development of Critical thinking skills in the learners, Class teachers developing clear guidance on how parents can assist with take-home assignment in such a way that it stimulate critical thinking skills in the learners and parents to make use of online platforms where they can share right parenting strategies aimed at promoting critical thinking skills in their children. Finally, further research is recommended on impact development of contextualized definitions, pedagogies and assessment of Critical thinking skills in enhancing the role of parents as co-educators under the new CBC.

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