

Parents' Awareness of Home Learning Environment and Its Influence on Children's Academic Achievement in North 'A' District -- Unguja, Zanzibar

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ABSTRACT

This study examined parents' awareness of the Home Learning Environment (HLE) and its influence on children's academic achievement in North 'A' District, Unguja, Zanzibar. A mixed-methods descriptive cross-sectional design was employed, collecting data from 45 respondents comprising 20 parents, 10 teachers, and 15 students drawn from three primary schools: Mkokotoni, Mkwajuni, and Mbuyu Maji. Questionnaires using a 5-point Likert scale were administered to parents, semi-structured interviews were conducted with teachers, and focus group discussions were held with students. Quantitative data were analyzed using descriptive statistics, while qualitative data were analyzed thematically following Braun and Clarke's six-phase framework. Content and construct validity were established through pre-testing and piloting of the instruments, while triangulation across data sources strengthened the reliability and trustworthiness of the findings. Findings revealed that parents' awareness of HLE was generally low across all measured domains: only 30% of parents reported having sufficient time to direct their children's academic matters, 25% considered helping with academics a parental duty, 30% provided homework support, 35% attended school meetings, and only 45% believed their educational level enabled them to support their children's learning. Parental education level, occupational demands such as fishing and farming, and economic constraints were identified as the primary barriers to an effective HLE. The study concludes that low parental awareness negatively affects children's academic achievement, consistent with Walberg's theory of academic achievement, which identifies the home environment as a critical variable influencing student outcomes. The study recommends targeted parental education programs, flexible school-parent engagement strategies, policy interventions addressing socioeconomic barriers, and longitudinal research examining the causal relationship between HLE awareness interventions and academic achievement outcomes.

Keywords: Academic Achievement, Home Learning Environment, Parental Awareness, Primary Education, Zanzibar.

INTRODUCTION

The Home Learning Environment (HLE) constitutes a broad construct encompassing the quality and quantity of educational stimulation offered to children within their family microsystem [1]. According to Dearing and Tang [1], the overall quality and quantity of stimulation provided to a child within the family's microsystem creates a learning environment that significantly influences the child's development trajectory. A well-developed HLE fosters positive attitudes toward learning, curiosity, and self-confidence in children [2]. Scotland and Alba [2] emphasized that children who experience supportive home learning environments develop greater academic self-efficacy and demonstrate more positive approaches to learning challenges. HLE encompasses the surroundings in which children find themselves, containing socio-cultural knowledge and skills that are important for children's growth and the development of their literacy skills throughout their lifespan [3,4]. Academic

achievement, defined as students' success in meeting educational goals as measured by test scores, grades, grade point averages, and degrees [5,6], is intricately linked to the home environment. In both developed and developing countries, the home environment is an important determinant of academic achievement among children. In Germany, the Aqua Fam intervention study examined the effects of family support programs on children's development [7]. In the United States, Schultz [8] investigated broken family structures and their consistent link to educational difficulties for children. Research by Hong and Lee [9] on parental awareness of children's homework motivation among Chinese fifth and seventh graders found that a high level of parental awareness was associated with high achievement and positive attitudes toward homework. In Tanzania, the home environment has a significant impact on children's academic achievement. Uwezo [10] and Mlay [11] argued that children whose home language matches the language they hear at school perform better not only in Kiswahili but also in English and numeracy. The Zanzibar Education Policy [12] recognizes parents as principal caretakers of children not only in the school environment but also in the home learning environment. However, experience shows that the home environment for most children in Zanzibar does not meet this expectation; most parents are busy with social and economic activities [13,14]. Chai, Juma, and Mohammed [15] indicated that HLE in Zanzibar faces different challenges, including parental illiteracy, shortage of time for parents to support their children, and lack of sensitive learning programs from schools. Despite these studies, few have specifically examined parents' awareness of HLE and its influence on children's academic achievement in Zanzibar's North 'A' District. This study addresses this gap.

Statement of the Problem

Three crucial elements of HLE foster children's educational growth: active engagement in learning activities, quality of parent-child interactions, and access to educational resources and materials [16]. This has been acknowledged by the Zanzibar Education Policy 2006 [12] and drives initiatives such as TUSOME PAMOJA, UNICEF, and USAID. However, the extent to which HLE contributes to academic achievement remains a question requiring further investigation in Zanzibar. This study quantitatively and qualitatively investigated parents' educational level, family income, household chores, and home learning supervision — themes that have not been recently studied in North 'A' District.

Research Question

The study was guided by the following research question: What is the level of parents' awareness of the home learning environment regarding children's academic achievement in North 'A' District, Unguja, Zanzibar?

Significance of the Study

Academically, this study fills a gap in the literature on HLE in developing countries. The research provides scholars with rich empirical data, contributing to ongoing academic discourse. The findings are of substantial importance to educational officers, school heads, parents, and children. The study provides a comprehensive understanding of the status of HLE in Zanzibar and a basis for evidence-based policymaking.

LITERATURE REVIEW

Theoretical Framework

This study was guided by Walberg's Theory of Academic Achievement (1986) [17]. Walberg's theory represents an early synthesis of existing research on educational effects and continues to influence current research on predictors of academic achievement in large-scale academic achievement assessment studies [17,18]. Walberg identified key variables that affect student outcomes: student ability or prior achievement, motivation, age or developmental level, quantity of instruction, quality of instruction, classroom climate, home environment, peer group, and exposure to mass media outside of school [17,18]. This theory directly relates to the study objective, as home environment is conceptualized as a critical variable in the educational productivity model.

Empirical Literature Review

Hong and Lee [9] investigated parental awareness of children's homework motivation and preference among 329 Chinese fifth graders and 244 seventh graders. The level of match between children's homework preferences and parents' perception of their child's homework preferences indicated a fairly high level of awareness. In general, a high level of parental awareness of a child's homework preferences was associated with high achievement and a positive attitude toward homework [9].

Wati [19] examined parents' awareness of the importance of education and its influence on decision-making for educational extensions for children. Using Cooper's approach combined with the prism method, the findings showed that higher academic performance was observed in high socioeconomic status groups relative to low socioeconomic status groups, and the home setting was strongly correlated with educational achievement.

Adoyo [20] investigated the influence of home environment on the academic performance of primary school pupils in the English language in Kenya. The study found that home environment significantly influenced English language performance. Shao and Kang [21] investigated how parent-child relationships relate to learning engagement and found that parent-child relationships were directly correlated with adolescents' learning engagement.

Khamis [14] investigated the influence of home environment on pupils' academic achievement in Zanzibar using a case study design. Findings indicated that home environment influences pupils' academic achievement, whereby pupils with stimulating home learning environments have a high possibility of achieving better in their academic tasks; those with negative home environments mostly end up with undesirable academic achievement.

Seni and Onyango [22] investigated the roles of parents in enhancing children's academic performance in Nyamagana District, Tanzania, using a mixed research approach. The study concluded that parents are not performing well on parenting issues, with many not playing their role effectively. Parental communication with teachers was limited, and parental participation in supervising students' learning at home was minimal.

Research Gap

Based on the literature reviewed, an apparent knowledge gap exists in prior research concerning HLE and children's academic achievement. Prior research did not adequately address parental awareness as a distinct construct in North 'A' District, Unguja, Zanzibar. This study addresses this gap by focusing specifically on parents' awareness of HLE and its influence on children's academic achievement.

METHODOLOGY

Study Area

The study was conducted in North 'A' District, Unguja, Zanzibar. This area was selected because the home environment in North 'A' District faces difficult conditions regarding income, parent awareness, and household chores that may affect parents' ability to actively support children's academic achievement. Additionally, previous National Examination results (2021–2022) indicated that students' average performance for Standard Four was lower compared to other districts in Unguja. The study involved Mkokotoni, Mkwajuni, and Mbuyu Maji Primary Schools, all located in North 'A' District, Unguja.

Research Approach and Design

Research Approach

The study employed a mixed-methods approach, whereby the researcher incorporated methods of collecting and analyzing data from both quantitative and qualitative research approaches in a single research study [23]. The mixed-methods approach provides a better understanding of research problems, resulting in better solutions for discovered issues [24].

Research Design

This study employed a descriptive research design using a cross-sectional study approach. Studies with a cross-sectional design involve collecting information on the presence or level of one or more variables of interest at a single time point [25]. The researcher applied a cross-sectional design because it collected information on the presence and level of variables of interest (home learning environment and children's academic achievement) simultaneously.

Study Population

The target population comprises the group of individuals with whom the intervention intends to conduct research and draw conclusions [26]. The population targeted in this study included students, teachers, and parents from three selected primary schools in North 'A' District, Zanzibar. The researcher used this population because they are key stakeholders related to HLE and children's academic achievement in primary schools.

Sample Size and Sampling Techniques

Sample Size

The study involved 45 respondents: 20 parents, 10 teachers, and 15 students. Based on the rule of thumb that 30 data points provide enough information to make a statistically sound conclusion about a population, the selected sample size provided sufficient information required by the researcher.

Table 1. Determination of Sample Size

S/N	Category of Study Population	Sample	Tool Used for Data Collection
1	Students	15	Focus Group Discussion
2	Ordinary Teachers	10	Interview
3	Parents	20	Questionnaire
	Total	45	

Source: Field Data, 2026

Sampling Techniques and Procedures

Sampling is a physical representation of all elements in the population from which the sample is drawn [27]. This study used both probability and non-probability sampling techniques. For non-probability sampling, the researcher applied this technique for questionnaire data collection involving 20 respondents. Judgmental sampling was used, whereby sampling was done based on expert knowledge of the population to decide which units should be sampled. In this study, judgmental sampling involved 10 respondents through interviews. Additionally, 15 students were involved in FGDs, selected through collaboration with head teachers to obtain Standard IV students.

Data Collection Methods and Tools

The study used primary sources of data to obtain information from respondents within selected public organizations. Primary data were collected directly from selected primary schools in North 'A' District using three important tools: questionnaires, interviews, and FGDs.

Questionnaires were administered to parents using a 5-point Likert scale format (1 = Strongly Agree to 5 = Strongly Disagree) with mostly closed-ended questions and a few open-ended questions to obtain quantitative data. Semi-structured interviews were conducted with 10 teachers as key informants to acquire in-depth information about study objectives. FGDs were conducted with 15 students to scrutinize information gathered from different approaches to ensure accuracy and credibility.

Validity and Reliability

Validity

Validity refers to how accurately a method measures what it is intended to measure [28]. The researcher used credibility validity, employing strategies such as questionnaires and interview techniques, checked through pre-testing before going to the field, pilot testing, establishing researcher authority, and structural coherence. The researcher conducted pre-testing of questionnaires and interview guides with 5 people. The pilot study allowed for robust validation using content and construct validity assessments, ensuring the instrument was clear and relevant for the target population [29].

Reliability

Reliability is the extent to which an instrument produces the same information at a given time or over time [30]. For qualitative data, the researcher posed the same question to more than one respondent to ensure data consistency. Triangulation was used to seek the same information using different data collection techniques. Trustworthiness was divided into credibility, dependability, and transferability [31].

Credibility was enhanced by the researcher describing experiences and verifying research findings with participants. Dependability was achieved when another researcher concurred with decisions at each stage of the research process. Transferability was met because the results have meaning for individuals and involve readers in associating results with their own experiences.

Data Analysis

Data analysis is the process by which data are searched and arranged by researchers to be understood and enable them to present for others to read [32]. Quantitative data from questionnaires were analyzed through descriptive analyses using frequencies and percentages, presented in tables. Qualitative data from interviews and FGDs were analyzed using thematic analysis techniques.

Thematic analysis is a method for familiarizing data, generating codes, combining codes into themes, reviewing themes, determining the significance of themes, and reporting findings [33]. The researcher became familiar with study data through transcribing audio and reading text, coded data by creating shorthand labels to describe content, generated themes by identifying patterns among codes, reviewed themes to ensure usefulness and accuracy, defined and named themes, and wrote up the analysis addressing each theme with sub-themes and examples from the data.

Ethical Considerations

Research ethics involves the application of moral rules and professional codes of conduct to the collection, analysis, reporting, and publication of information about research subjects [34]. The study was conducted after obtaining permission involving a letter of introduction from the State University of Zanzibar (SUZA) and a permission letter from the Second Vice President's Office of Zanzibar. The researcher also sought permission from head teachers.

Ethical approval for this study was granted by the State University of Zanzibar (SUZA); all participants provided informed consent prior to data collection, and the confidentiality and anonymity of respondents were maintained throughout the research process to avoid harming or violating others during the study.

RESULTS AND DISCUSSION

Profile of Respondents

This study considered several characteristics of respondents, including age, educational level, gender, and occupation. These demographics provide statistical profiles that describe populations and their characteristics.

Table 2. Age of Respondents

Age Category of Respondents	Frequency	Percent
Parents' Age (n=20)		
Below 35 years	2	10.0
36–49 years	14	70.0
50 years and above	4	20.0
Students' Age (n=15)		
9 years	2	13.3
10 years	11	73.3
11 years	2	13.3
Teachers' Age (n=10)		
30–35 years	4	40.0
36–40 years	2	20.0
41–45 years	3	30.0
46 years and above	1	10.0

Source: Field Research Data, 2026

Table 2 shows that most parents (70%) were in the 36–49 age range, representing the labor force age capable of supporting children's learning. Most students (73.3%) were 10 years old, an age at which children can analyze and understand home learning conditions. Regarding teachers' age distribution, the largest group (40%) was aged 30–35 years, representing relatively experienced but still energetic educators.

Table 3. Parents' Occupation

Category of Answer	Frequency	Percentage
Farmers	5	25.0
Fisher	7	35.0
Teacher	4	20.0
Pharmacist	1	5.0
Others	3	15.0
Total	20	100.0

Source: Field Research Data, 2026

Table 3 shows that most respondents were fishers (35%) and farmers (25%). These results reflect the economic activities of North 'A' District residents, as noted in the 2022 population census, which found that most residents are fishers, farmers, and public employees [35].

These results reveal that HLE is affected by various economic activities that people engage in daily. This finding aligns with Chai et al. [15], who found that parents claim they must work to maintain their family's financial standing, causing them to work from morning to late evening or nighttime, resulting in a lack of time for school involvement or helping children with schoolwork.

Parents' Awareness of HLE and Children's Academic Achievement

Parents' Educational Level to Support Children

Parents' education level has a significant impact on children's academic achievement because parents who have attended college or graduate school tend to place a high value on education [36].

Table 4. Parents' Educational Level to Support Children

Category of Answer	Frequency	Percentage
Strongly Disagree	0	0
Disagree	4	20.0
Neutral	7	35.0
Agree	5	25.0
Strongly Agree	4	20.0
Total	20	100.0

Source: Field Research Data, 2026

Table 4 indicates that 45% (Agree + Strongly Agree) of parents believed their education level enabled them to support children's learning at home, while 25% of respondents argued they cannot help their children study at home due to a lack of education. During interview sessions, Teacher 2 stated: "The level of education is essential for the parent or guardian to help the child in matters related to the child's educational career. Sometimes children need educational help, for example, guidance in doing school homework; educated parents or guardians can solve this problem simply" (T2, Interview, May 2026). This finding aligns with Onyedikachim and Ezekiel [36], who evaluated parents' level of education as part of a larger constellation of psychological and sociological variables influencing children's school outcomes.

Parents' Time to Direct Children Toward Academic Matters

Li and Guo [37] posited that children's development is greatly influenced by the time they spend with their parents, and that academic success and mental health are both strongly correlated with children's well-being.

Table 5. Parents' Time to Direct Children Toward Academic Matters

Category of Answer	Frequency	Percentage
Strongly Disagree	5	25.0
Disagree	5	25.0
Neutral	4	20.0
Agree	4	20.0
Strongly Agree	2	10.0
Total	20	100.0

Source: Field Research Data, 2026

Table 5 illustrates that only 30% (Agree + Strongly Agree) of parents have time to direct their children toward academic matters, indicating that the situation of parents and guardians in planning time to help their children with education is not satisfactory. During interview sessions, Teacher 3 stated: "Indeed, most parents do not have enough time to guide their children in their schoolwork, and this is due to distinct reasons, including being overwhelmed by responsibilities and lack of knowledge relating to their studies" (T3, Interview, May 2026). This finding aligns with Bunijevac [38], who portrayed that many families are faced with overwhelming and

unpredictable schedules while juggling school, sports, family situations, work schedules, and other responsibilities.

Parents' Duties at Home

Although part of a parent's job is to assist their child in developing a home learning mentality, parents sometimes struggle to focus their children and find the ideal balance between screen time and play [39].

Table 6. Parents' Duties at Home

Category of Answer	Frequency	Percentage
Strongly Disagree	4	20.0
Disagree	4	20.0
Neutral	7	35.0
Agree	3	15.0
Strongly Agree	2	10.0
Total	20	100.0

Source: Field Research Data, 2026

Table 6 highlights that only 25% (Agree + Strongly Agree) of parents understand that helping their children with academic matters is among their duties at home. During FGD sessions with students, many respondents indicated that children face difficult conditions at home and have difficulty finding support from parents. Teacher 9 stated: "No, normally students at home environment do not get enough support for many reasons, including some parents' lack of understanding of school subjects and lack of willingness of parents to support their children" (T9, Interview, May 2026). This finding aligns with Chapel and Choeda [40], who found that contextual factors contribute to less parental involvement in their children's homework.

Parents' Support for Children's Homework

Parental support for children's homework is very important for developing consistent parent-child communication, home supervision, homework help, emotional support, and parental expectations [41].

Table 7. Parents Supporting Children's Homework

Category of Answer	Frequency	Percentage
Strongly Disagree	2	10.0
Disagree	8	40.0
Neutral	4	20.0
Agree	1	5.0
Strongly Agree	5	25.0
Total	20	100.0

Source: Field Research Data, 2026

Table 7 illustrates that only 30% (Agree + Strongly Agree) of parents take responsibility for helping their children with homework while at home. The assistance that children receive from their parents for homework given at school is slight and not satisfactory for educational success in the study area. This finding aligns with Chai et al. [15], who noted that some parents are not capable of helping their children with homework because they do not know how to read and write.

Parents' Attendance at School Meetings

Parental attendance at school meetings directly connects to students' academic achievement because participation helps parents know their responsibilities, increase relationships with schoolteachers, share information, and work together to improve HLE toward children's academic achievement [42].

Table 8. Parents' Attendance at School Meetings

Category of Answer	Frequency	Percentage
Strongly Disagree	4	20.0
Disagree	2	10.0
Neutral	7	35.0
Agree	7	35.0
Strongly Agree	0	0
Total	20	100.0

Source: Field Research Data, 2026

Table 8 shows that only 35% of parents attend school meetings, indicating weak awareness among parents toward attendance at school meetings. During FGD sessions, Student 2 highlighted: "When I tell my parents the message that was given by my teacher that there is a parents' meeting at school, they used to respond to me, but they didn't attend school meetings. Teachers blamed us for not sending messages to our parents" (S2, FGD, May 2026). This finding corroborates Chai et al. [15], who reported, during an interview with one parent, that it is not a parent's role to participate in school meetings, as parents perceived that they sent their children to school because qualified personnel were employed for the task.

Parents' Role in Creating a Supportive HLE

In this section, the researcher sought to establish the role of parents in creating a supportive HLE, a fundamental aspect of improving children's social, academic, and motor skill development. This role relates to capitalizing on children's interests in selecting learning experiences and to enabling them to actively interact with, explore, and question their environment. Figure 1 presents the field results on this theme.

Parents' role in creating a supportive home learning environment

Figure: 4.1 Parents' role in creating a supportive home learning environment.

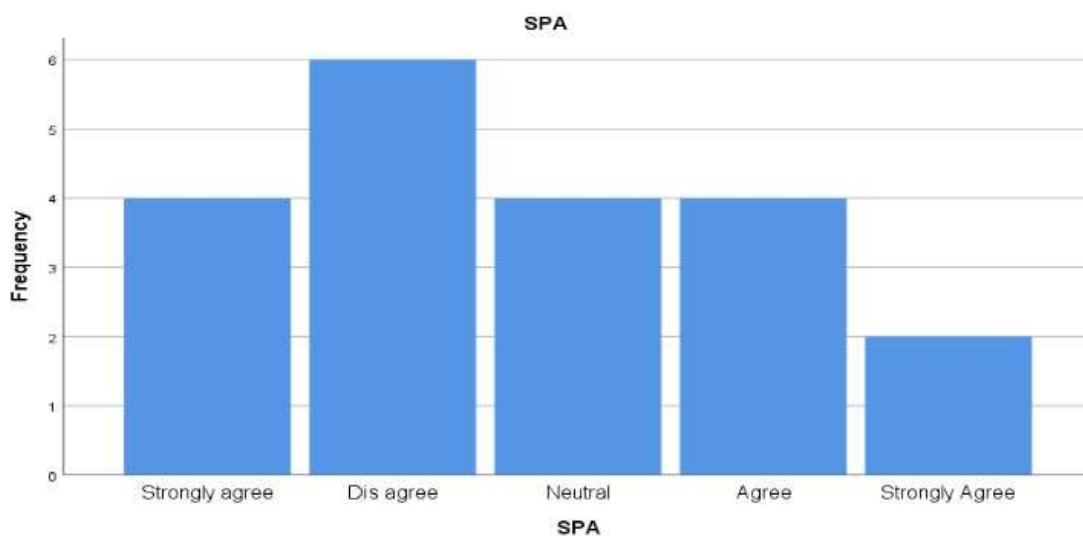


Figure 1. Parents' Role in Creating a Supportive Home Learning Environment

Source: Field Research data, 2024

Figure 1 illustrates that (n=4) equal to (20.0%) scored agree. While (n=4) equal to (20.0%) scored Neutral. Whereby (n=6) equal to (30.0%) scored disagree. Whilst (n=4) equal to (20.0%) scored strongly disagree and (n=4) equal to (20.0%) scored strongly agree. The low percentage of parents who recognize their role in creating a supportive HLE (35%) is concerning, as it suggests that many parents may not understand how their daily interactions, provision of learning materials, and encouragement of curiosity can significantly influence their children's academic development. This lack of awareness is particularly problematic in the context of North 'A' District, where many parents have limited formal education and are engaged in time-consuming occupations such as fishing and farming.

During an interview session, Teacher 2 explained: "Parents are the managers of the children, and they are the ones responsible for making sure that they create a friendly environment for their children in learning at home, such as finding materials for them, such as books" (T2, Interview, May 2026). Teacher 5 further elaborated: "Most parents in this area do not understand that they can support their children's learning even with limited resources. Simple things like asking about what they learned at school, providing a quiet place for homework, or showing interest in their studies can make a big difference" (T5, Interview, May 2026).

This finding aligns with Hong and Lee [9], who found that students whose parents report an elevated level of awareness of the home learning environment show higher achievement and more positive attitudes toward learning than their counterparts. The finding also corresponds with Topor, Keane, Shelton, and Calkins [43], who noted that parents play a critical role in promoting academic success through parent-school involvement, stimulation of cognitive growth at home, and promotion of values consistent with academic achievement — an area where the gap between the most and least advantaged learners may be most apparent. Similarly, a review by the Department for Children, Schools and Families [44] found that parental support for children's autonomy in homework was associated with higher scores, whereas direct parental involvement in assignments not intended to be interactive or collaborative, particularly when the child was struggling, was associated with lower scores.

DISCUSSION

Interpretation of Findings in Context

The findings of this study reveal consistently low levels of parental awareness across all measured dimensions of HLE in North 'A' District, Unguja, Zanzibar. This section offers a deeper interpretation of these findings, exploring why awareness levels are low in this specific context and comparing the results with other similar studies in East Africa and beyond.

Why Are Awareness Levels Low?

The persistently low levels of parental awareness observed in this study can be attributed to several interconnected factors that characterize the North 'A' District context. First, the occupational structure of the district, dominated by fishing (35%) and farming (25%), creates significant time constraints for parents. As Teacher 3 noted during interviews, parents in this area often leave home before dawn and return after dark, leaving minimal time for meaningful engagement with their children's education. This finding resonates with the work of Chai et al. [15], who observed similar patterns in other parts of Zanzibar, where parents' economic survival strategies take precedence over educational engagement. Second, the limited educational attainment among parents in the study area contributes to low awareness. Only 45% of parents believed their education level enabled them to support children's learning, and this perception may reflect actual educational limitations. In Zanzibar, where adult literacy rates remain below national targets in rural districts [45], parents who lack basic literacy skills may feel ill-equipped to assist with homework or engage meaningfully with school-related materials. This creates a vicious cycle: parents with limited education may avoid involvement due to feelings of inadequacy, resulting in even less awareness of how they could contribute to their children's learning. Third, economic constraints compound the problem. When families struggle to meet basic needs such as food and shelter, educational engagement becomes a lower priority. As one parent commented during questionnaire

responses, "I need to find food for my children first before I can think about their homework" (P8, Questionnaire, May 2026). This perspective reflects the reality of economic precarity in North 'A' District, where daily survival demands dominate parental attention.

Fourth, cultural factors may also play a role. In some communities in Zanzibar, education is still perceived primarily as the responsibility of teachers and schools, with parents viewing their role as limited to providing material support (school fees, uniforms, and supplies) rather than active academic engagement. This perception, noted by Chai et al. [15] and reflected in some parent responses, represents a fundamental barrier to HLE awareness that requires targeted intervention.

Comparison with Studies in East Africa

The findings of this study align with research conducted elsewhere in East Africa, suggesting that low parental awareness of HLE is not unique to North 'A' District but reflects broader regional challenges. Seni and Onyango [22], in their study of Nyamagana District, Tanzania, found that parental participation in supervising students' learning at home was minimal and that communication between parents and teachers was limited. Similarly, Adoyo's [20] study in Kenya found that home environment significantly influenced English language performance, with parents' educational level and time availability identified as critical factors. However, the present study reveals lower awareness levels than some findings from other contexts. For example, Hong and Lee's [9] study in China found a fairly high level of parental awareness regarding children's homework preferences, likely reflecting different cultural expectations, educational policies, and socioeconomic conditions. This comparison suggests that the particularly low awareness levels in North 'A' District may be partly attributable to the specific combination of economic challenges, educational infrastructure, and historical factors that characterize this region of Zanzibar.

Theoretical Implications

The findings of this study provide empirical support for Walberg's Theory of Academic Achievement [17,18], which identifies home environment as one of nine key variables affecting student outcomes. In North 'A' District, the home environment variable is characterized by low parental awareness, limited time investment, inadequate resources, and weak parent-school connections. According to Walberg's model, educational productivity is influenced by the interplay of student ability, motivation, instructional quality, and environmental factors, including the home environment. The low levels of HLE awareness observed in this study would predict lower academic achievement, consistent with the national examination results that motivated this investigation. The findings also extend Walberg's theory by highlighting the mechanisms through which home environment influences achievement. The data suggest that parents' awareness or lack thereof operates through multiple pathways: direct support (homework assistance, provision of learning materials), indirect support (attendance at school meetings, communication with teachers), and attitudinal support (valuing education, creating a learning-conducive atmosphere at home). This multifaceted conceptualization of HLE awareness enriches Walberg's framework and provides a more nuanced understanding of how the home environment variable operates in practice.

Implications for Intervention Design

The findings have important implications for designing interventions to improve HLE awareness. The low baseline awareness levels across all dimensions suggest that interventions must address both knowledge deficits (what parents should do) and structural barriers (enabling parents to do it). Effective interventions would need to include: **Awareness-raising components** that help parents understand the importance of their role in children's learning, delivered through accessible formats such as community meetings, religious institutions, and local media. **Skills-building components** that equip parents with practical strategies for supporting learning at home, even with limited resources and time constraints. **Structural supports** that address the barriers to participation, such as flexible school meeting schedules, home-based outreach, and community learning centers. **Cultural adaptation** that respects local values while introducing new practices, potentially through community leaders and social networks.

Unique Contribution to Knowledge

This study makes several unique contributions to the existing body of knowledge on HLE and academic achievement. First, it provides the first systematic investigation of parental awareness of HLE in North 'A' District, Unguja, Zanzibar, addressing a gap in the literature that previous studies had not covered. While prior research by Khamis [14] examined the influence of home environment on academic achievement in Zanzibar more broadly, and Chai et al. [15] identified challenges of parental involvement, this study specifically focuses on parental awareness as a distinct construct, offering more targeted insights for intervention.

Second, the study contributes empirical data from a rural district context, which is underrepresented in the existing literature on HLE. Much of the research on HLE has been conducted in urban or peri-urban settings, and rural contexts like North 'A' District have received less attention despite having different characteristics and challenges. The unique combination of fishing/farming livelihoods, limited infrastructure, and distinct cultural dynamics in this district provides valuable insights for policymakers and practitioners working in similar contexts.

Third, the study's mixed-methods approach, combining quantitative survey data with qualitative interviews and focus group discussions, provides a richer understanding of HLE awareness than either approach alone could achieve. The triangulation of data sources enhances the credibility of the findings and reveals the complex interplay of factors that shape parental awareness.

Study Limitations

This study has several limitations that should be acknowledged and considered when interpreting the findings.

Sample Size and Generalizability

The sample size of 45 respondents (20 parents, 10 teachers, and 15 students) from three primary schools in North 'A' District is relatively small. While this sample size was sufficient to provide meaningful insights and identify patterns, it limits the generalizability of the findings to other districts in Zanzibar or Tanzania. The rule of thumb that 30 data points provide enough information for statistically sound conclusions is a minimal standard, and a larger sample would have provided greater statistical power and precision. The small sample size also means that subgroup analyses (e.g., comparing awareness levels by parent gender, age, or occupation) were not feasible, limiting the depth of analysis.

Single-District Focus

The study was conducted exclusively in North 'A' District, Unguja, Zanzibar, which has specific socioeconomic and cultural characteristics that may not be representative of other districts. The dominance of fishing and farming livelihoods in this district may produce different patterns of parental awareness compared to urban districts or areas with different economic structures. This single-district focus limits the applicability of the findings to other contexts within Zanzibar and Tanzania.

Cross-Sectional Design

The cross-sectional design of this study collected data at a single point in time, which prevents the establishment of causal relationships between HLE awareness and academic achievement. While the study found associations between low parental awareness and various HLE factors, it cannot determine whether low awareness causes poor academic outcomes or whether other unmeasured variables (such as household wealth, parental motivation, or community factors) account for both. Establishing causality would require longitudinal research that tracks changes in parental awareness and academic achievement over time.

Self-Reported Data

The study relied heavily on self-reported data from parents through questionnaires. Self-reported data are subject to various biases, including social desirability bias (respondents providing answers they perceive as socially acceptable), recall bias (respondents inaccurately remembering past events or behaviors), and response fatigue. Parents may have overestimated their awareness or involvement in their children's learning due to social desirability concerns, meaning that actual awareness levels may be even lower than reported.

Student Perspectives

While the study included student perspectives through FGDs, the students were Standard IV children aged approximately 10 years, whose ability to articulate their experiences and perceptions may be limited. Older students might have provided different or richer insights into home learning conditions and parental awareness.

Parental Education and Literacy

The study did not directly assess parental literacy levels, instead relying on parents' self-reported perception of whether their education enabled them to support children's learning. This indirect approach may not capture the full range of literacy challenges that parents face, and direct literacy assessments would have provided more objective data on this important factor.

Limited Examination of Academic Achievement Outcomes

The study did not directly measure children's academic achievement through standardized tests or school records but instead relied on perceptions and national examination trends. Direct measurement of academic outcomes would have provided a more robust basis for examining the relationship between HLE awareness and achievement.

CONCLUSIONS

This study examined parents' awareness of HLE and its influence on children's academic achievement in North 'A' District, Unguja, Zanzibar. The findings reveal consistently low levels of parental awareness across all measured dimensions. Only 45% of parents believed their education level enabled them to support children's learning at home. Only 30% of parents reported having sufficient time to direct children toward academic matters. Only 25% of parents recognized helping children with academic matters as among their duties at home. Only 30% of parents provided homework support to their children. Only 35% of parents attended school meetings. Most parents demonstrated low awareness of their role in creating supportive home learning environments, with only 35% recognizing this significant responsibility.

The study concludes that parents' awareness of HLE significantly influences children's academic achievement, and current awareness levels in North 'A' District are insufficient to support optimal educational outcomes. These low awareness levels are compounded by occupational demands (fishing and farming), limited parental education, and economic constraints. Walberg's theory of academic achievement identifies home environment as one of nine key variables affecting student outcomes [17]. The current findings demonstrate that in North 'A' District, the home environment variable is characterized by low parental awareness, limited time investment, inadequate resources, and weak parent-school connections. This suggests that interventions must address not only the presence of home environment factors but also parents' awareness of their importance and practical strategies for implementation.

RECOMMENDATIONS

Recommendations for Practice and Policy

Based on the findings, the following recommendations are made:

1. Ministry of Education and Vocational Training: Community-Based Parental Education Programs

The Ministry of Education and Vocational Training should develop community-based parental education programs focusing on HLE awareness, practical support strategies, and the importance of parent-school partnerships. These programs should be delivered through accessible formats such as community meetings, religious institutions, and local media. The content should be simple, practical, and culturally appropriate, emphasizing that parents can support their children's learning even with limited education and resources.

2. Schools: Flexible Parent Engagement Strategies

Schools should implement flexible meeting schedules (evenings and weekends) and alternative communication methods (mobile phones, community radio, and home visits) to accommodate parents' occupational constraints. Schools should also establish parent education sessions that address the specific barriers identified in this study, including parents' limited understanding of their role and the importance of HLE.

3. Ministry of Education and Vocational Training: Policy Provisions for HLE Support

Zanzibar's education policy should include specific provisions for HLE support in rural districts, including resources for home learning materials, parental training programs, and incentives for parent participation. The policy should also address the socioeconomic barriers to parental involvement, recognizing that economic constraints are a primary obstacle to HLE awareness and engagement.

4. Teacher Training Institutions: Modules on Parent Engagement

Pre-service and in-service teacher training should include modules on engaging parents from low-awareness backgrounds and communicating effectively with parents facing literacy challenges. Teachers should be equipped with strategies for reaching out to parents, explaining the importance of HLE, and supporting parents in their role, even in resource-constrained settings.

5. Community-Based Approaches: Leveraging Local Social Structures

Community-based approaches leveraging local social structures (religious leaders, community elders, and cooperative societies) should be developed and implemented. These structures can serve as channels for HLE awareness campaigns and provide culturally appropriate support for parental engagement. Religious institutions, which have significant influence in Zanzibar communities, could be particularly effective partners in promoting HLE awareness.

Practical Implementation Strategies

Practical Implementation Strategies: Barriers, Facilitators, and Pathways to Success

The successful implementation of interventions to enhance parental awareness of the Home Learning Environment in North 'A' District requires careful consideration of both the obstacles that may impede progress and the enabling factors that can be leveraged to overcome these challenges. Understanding this landscape of barriers and facilitators is essential for designing realistic, contextually appropriate strategies that can achieve meaningful and sustainable change.

Barriers to Implementation

Several significant barriers must be acknowledged and addressed in any implementation effort. The most

fundamental challenge lies in the limited resources available at both school and community levels for implementing comprehensive parental education programs. Schools in North 'A' District, like many rural institutions in Zanzibar, operate with constrained budgets that prioritize basic instructional needs over supplementary programs such as parent engagement initiatives. This resource constraint is compounded by the low priority typically given to parental education programs in government budget allocations, where competing demands for infrastructure, teacher salaries, and instructional materials often take precedence.

Perhaps more challenging than resource constraints are the socioeconomic realities facing parents in the district. The very factors that contribute to low HLE awareness—parents' economic constraints and time demands from fishing and farming occupations—also serve as barriers to their participation in awareness programs. Parents who struggle to meet daily survival needs cannot easily allocate time for workshops or meetings, regardless of how valuable these might be for their children's education. This creates a fundamental tension between the need for parent engagement and the practical realities of parents' lives.

Cultural beliefs about the division of responsibility between parents and schools present another barrier that requires sensitive handling. As noted in the study findings, some parents perceive that they have sent their children to school precisely because qualified personnel are employed for educational tasks, viewing their own role as primarily material rather than academic. Shifting these deeply held perceptions requires not just information but a cultural shift that must be approached with respect for local values while introducing new understandings of parental responsibility.

Additionally, the limited capacity of teachers to conduct parent engagement activities represents a significant implementation barrier. Teachers in Zanzibar's primary schools often lack pre-service training in parent communication and engagement strategies, and their already heavy workloads leave little room for additional outreach activities. Without adequate preparation and support, even well-intentioned parent engagement initiatives may fail to achieve their objectives.

Facilitators of Successful Implementation

Despite these formidable barriers, several important facilitators exist that can be leveraged to support successful implementation. Most notably, existing community structures and social networks provide a foundation for reaching parents that does not require building new infrastructure from scratch. The social fabric of North 'A' District, with its networks of extended families, neighborhood associations, and community gatherings, offers channels through which awareness messages can flow and through which parents can support one another in their educational roles.

The positive attitudes of some parents toward education, as evidenced by the 45% who believed their education enabled them to support children's learning, provide a foundation upon which to build. These parents can serve as champions and peer educators, demonstrating to other parents the value of engagement and modeling practical strategies for supporting children's learning at home. Their existing commitment suggests that awareness programs are not starting from zero but rather building on existing positive dispositions.

Government commitment to educational improvement, as reflected in policies such as the Zanzibar Education Policy 2006 and initiatives such as TUSOME PAMOJA, provides important policy backing for HLE awareness interventions. This commitment creates an enabling environment in which parental education programs can be situated within broader educational reforms, increasing their legitimacy and potential for institutionalization.

The significant presence of NGOs and international organizations in Zanzibar, including UNICEF and USAID, offers resources and technical expertise that can be mobilized to support HLE awareness programs. These organizations have existing relationships with the Ministry of Education and local schools and can provide

funding, materials, and capacity-building support that might otherwise be unavailable.

Finally, the potential for using mobile technology to reach parents with information is a promising facilitator in the Zanzibar context. With mobile phone penetration increasing even in rural areas, SMS campaigns, voice

messages, and mobile-based parent education content could reach parents who cannot attend in-person meetings due to time or distance constraints, supplementing face-to-face engagement with technology-enabled communication.

Suggested Measures of Success

To track progress and determine whether interventions are achieving their intended effects, several measures of success should be monitored systematically throughout implementation. Increased attendance at school meetings serves as a direct indicator of enhanced parent-school engagement, with a target of 50% increase within 12 months representing a significant shift from current low participation levels. This target is ambitious but achievable given targeted efforts to address scheduling barriers and communicate the importance of attendance.

Increased percentage of parents providing homework support, with a target of 30% increase within 12 months, reflects enhanced awareness of parents' role in supporting learning at home. This measure captures the behavioral change that is the ultimate goal of awareness programs, moving beyond knowledge to action.

Improved student academic performance on national examinations provides the ultimate validation of HLE awareness interventions, connecting increased parental engagement to the educational outcomes that drive policy attention. While academic improvements may take longer to manifest than other indicators, establishing baseline data and tracking trends over time will provide important evidence of program effectiveness.

Increased parental awareness as measured by follow-up surveys provides direct evidence that programs are achieving their primary objective of enhancing understanding. By administering the same questionnaire used in the baseline study to parents after program implementation, changes in awareness levels can be quantified and attributed to interventions.

Increased parent-teacher communication frequency indicates strengthened home-school connections, a key pathway through which HLE awareness translates into improved student outcomes. This can be measured through teacher reports, parent self-reports, and school records of communication contacts.

Potential Partnerships

Success in improving HLE awareness in North 'A' District will require collaboration among multiple stakeholders, each bringing distinctive resources and capabilities to the effort. The Ministry of Education and Vocational Training should serve as the lead policy and resource support partner, providing policy backing, budgeting for program sustainability, and ensuring alignment with national education priorities. Ministry engagement is essential for institutionalizing HLE awareness programs and preventing them from depending solely on short-term project funding.

Local government authorities in North 'A' District, including district education officers and community development officers, are crucial partners for implementation support and community mobilization. These officials have existing relationships with schools and communities and can facilitate access, broker partnerships, and coordinate with other development activities in the district.

NGOs operating in Zanzibar, including international organizations such as UNICEF and USAID as well as local organizations, can provide funding, technical expertise, materials, and capacity-building support. Many of these organizations already have education-related programs in Zanzibar and may be able to integrate HLE awareness components into their existing activities or provide specific support for this initiative.

Religious institutions and community leaders are essential partners for awareness campaigns and community mobilization. In Zanzibar, religious leaders have significant influence and can effectively communicate messages about the importance of parent involvement in education. Engaging imams, church leaders, and respected community elders in HLE awareness campaigns can lend credibility and reach parents who might not attend school-based events.

The State University of Zanzibar (SUZA) should serve as a partner for monitoring, evaluation, and research support. As the institution that conducted this study, SUZA has established relationships in the community and can provide the research expertise needed to track program impact rigorously. University involvement also ensures that lessons learned inform academic discourse and future research, contributing to the knowledge base on HLE in developing country contexts

Recommendations for Future Research

The following recommendations are made for future research:

1. Longitudinal Studies

Longitudinal studies examining the causal relationship between HLE awareness interventions and academic achievement outcomes are recommended. Such studies would track changes in parental awareness over time and their effects on children's academic performance, providing stronger evidence for causality than cross-sectional designs.

2. Comparative Studies

Comparative studies across different Zanzibar districts are recommended to determine whether the patterns observed in North 'A' District are consistent or vary by context. Such studies would help identify district-specific factors that influence HLE awareness and enable more targeted interventions.

3. Intervention Studies

Intervention studies that test the effectiveness of specific strategies for improving HLE awareness are recommended. These studies would provide evidence on "what works" to increase parental awareness and engagement, informing program design and resource allocation.

4. Studies Examining Mechanisms

Future research should examine the mechanisms through which parental awareness influences academic achievement. Such studies would explore pathways such as improved parent-child interactions, increased homework support, and enhanced school engagement, providing a more nuanced understanding of the relationships observed in this study.

5. Qualitative Studies Exploring Parent Perspectives

In-depth qualitative studies exploring parent perspectives on HLE and academic achievement are recommended. Such studies would provide richer understanding of the experiences, challenges, and aspirations of parents in North 'A' District and other similar contexts.

6. Studies Including Direct Measures of Academic Achievement

Future research should include direct measures of academic achievement (standardized test scores, school grades) rather than relying solely on perceptions or national examination trends. Such studies would provide more robust evidence on the relationship between HLE awareness and achievement.

7. Studies Examining the Role of Extended Family and Community

Research examining the role of extended family and community in supporting children's learning is recommended. In contexts like North 'A' District, extended family members and community networks may play important roles in children's education that have not been adequately explored.

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Ethical Approval Statement

This study was conducted in accordance with the ethical standards of the State University of Zanzibar (SUZA). Ethical clearance and permission to conduct the research were obtained from SUZA and the Second Vice President's Office of Zanzibar, and further permission was granted by the head teachers of the participating schools. Informed consent was obtained from all adult participants and from parents/guardians on behalf of child participants before data collection, and the confidentiality and anonymity of all respondents were maintained throughout the study.

Conflict Of Interest

The authors declare that they have no known competing financial interests or personal relationships that could have appeared to influence the work reported in this paper.

Data Availability Statement

The datasets generated and analyzed during the current study are not publicly available due to the confidentiality agreements made with participants but are available from the corresponding author on reasonable request.

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