

Teaching and Learning in Fragile Contexts (TLFC) Research Paper



Effects of Culturally Enhanced Activity Approach (CEAA) In Enhancing Learning Outcomes Of Internally Displaced Children In Fako Division, South West Region, Cameroon

Principal Investigator:
Dr. Etta Mercy Aki
Co-researcher:
Dr. Ijang Bih Ngyah-Etchutambe

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Executive Summary

Literacy is a core foundational skill that supports later learning and development. However, in teaching and learning in fragile contexts, the lived experiences of children are characterised by sounds of gun shots, loss of loved ones and burning down of schools. This results in loss of learning time and stress that further compounds challenges in literacy and resilience. In Cameroon, an ongoing armed conflict since 2016 has left many children internally displaced. As young children find themselves in new learning environments, they suffer from multiple deprivations ranging from learning loss, poor follow-up and the use of approaches that does not focus on their specific needs. The realisation of literacy, the core of foundational learning has remained a challenge. Efforts to address the situation has focused on the use of Child Friendly Spaces allowing children to receive mental and psychological support. These efforts are commendable but they remain divorced from resources and activities that are culturally and locally relevant. When learning is abstract from its environment, it becomes a burden rather than an enjoyable activity.

To curb these effects and support literacy and resilience development of internally displaced children, an intervention spanning 21 sessions across 4 weeks was co-created with internally displaced children, teachers, parents, and community stakeholders. The intervention included the use of locally enhanced songs, games and folktales used to support reading, spelling and resilience of 58 children assigned to both the control and treatment group. Findings showed that children who had received the intervention showed significant improvements in literacy and resilience reducing reading gaps by 5 months and increasing spelling gains overall by 4 additional words. This has implications for limiting the effects of learning time loss, providing developmental support for spelling and sustaining learning through perseverance. Targeted support is thus needed to improve the literacy and resilience of internally displaced children. The study was limited to 29 internally displaced children. More work needs to be done to scale the effects across Cameroon.

Key Findings

1. Enhanced local games significantly improves resilience but not literacy
2. Enhanced folktales improve literacy and resilience but the effects are not significant
3. Enhanced local songs significantly improves literacy (but not resilience) with larger effects on spelling than reading
4. Enhanced local activities significantly drives literacy and reading gains for boys while boosting spelling gains for girls with no gender differences in resilience
5. Literacy and spelling effects endure with songs while resilience endures with combined activities, games and folktales
6. Combined effect of songs, games and folktales significantly improves literacy but not resilience

Introduction

Literacy is a core foundational skill that supports later learning and development. However, in teaching and learning in fragile context, this must be matched with resilience – an individual's ability to respond in a positive way to what life brings (Wagnild, 2015). The relevance of literacy and resilience has been echoed in international and national policies and frameworks. For instance, one of the indicators of quality education as indicated in SDG 4.1.1 prioritizes the proportion of children in grade 2/3 who achieve at least a minimum proficiency in reading by the end of primary school (UN, 2015). This indicator equally emphasises gender as critical to the attainment of this goal. This is in line with goal 1 of Agenda 2063 that aims at achieving well educated citizens through 100% literacy rates by 2025 (a) and zero gender disparity by 2030 (b). These goals are imperatives for nations like Cameroon with an ongoing socio-political crisis. National efforts have been made towards the realization of these goals in Cameroon. In 2020, a 10 -year strategic plan - the National Development Strategy (NDS30) was developed to ensure that all boys and girls will complete a low cost, quality and free primary education leading to useful learning by 2030 (Ministry of Economy, Planning and Regional Development, 2020).

While efforts have been made at the policy front, realisation of these initiatives in practice remain staggering. About 70% of children complete primary schooling, unable to achieve minimum proficiency in reading in sub-Saharan Africa (UNESCO, 2025) and the situation is worst for boys (World Bank, 2021). Cameroon mirrors this trend as available 2019 data from UIS shows that girls (71%) had a lower learning poverty rate compared to boys (73%) whose learning poverty rates were higher than the average national rate (71.9%) as reported by the World Bank (2022). This situation has been worsened by increasing armed conflicts with detrimental effects particularly resulting in internal displacement of children. The 2025 global outlook report of UNICEF indicated that 47.2 million children were internally displaced by 2023. These rates are expected to increase across the years since as there are no signs of decline in intensity and violence (UNICEF Innocenti, 2025). While girls suffer the most from emotional stress in armed conflict situations, boys are reported to show poorer literacy rates. There is therefore a dire need to intervene and evaluate literacy and resilience in fragile context such as the one in Cameroon that currently suffers from an armed conflict since 2016.

Previous literature on the use of local activities in supporting literacy and resilience

Previous interventions using an integrated approach of literacy and resilience in fragile context is scarce. However, reviews and single studies on play-based activities provide a foundation for understanding the literature. For instance, a mapping study review carried out by Othman et al. (2025) indicated that through informal fun play-based activities, children develop skills in letter recognition, word building, and in

understanding the meaning of texts. Additionally, this method to Othman et al. (2025) enhances children's interest in reading and writing. Crosh et al (2024) found similar effects indicating that early literacy developmental activities like shared reading, storytelling and singing are associated with improved school readiness in children exposed to adverse childhood experiences. This underscores the need for activities that are interest and need driven as posited by the Mediated Mutual Reciprocity (MMR) theory of Tchombe (2023). A play-based teaching approach is always fun and engaging for children. Engagement and interest get higher when children can connect with the activities.

In a scoping review, Lewis and Kim (2024) focused specifically on music and found that music interventions aimed at improving reading skills improved auditory processing, phonological processing, and temporal processing. They argued that the underlying mechanisms that sparked reading accuracy was the rhythmic activities of the interventions. Songs are a component of music. The rhythmic nature of songs emphasises the need to repeat actions overtime and follow-up to provide required support. Turning on to games, a systematic review of Zeiler et al. (2025) on serious games designed to improve mental health literacy in 10-14-year-olds found that most serious games resembling real-world scenarios, fictional scenarios, or a combination of both improve aspects of mental health literacy. The current study is unique as several studies (see Alotaibi, 2024) focused on play-based activities have been limited to early childhood classrooms.

In folktales, findings from a scoping review by Ramamurthy et al. (2024) showed that cultural-based storytelling interventions in school settings with participatory approaches using positive psychology-based interventions were effective at building children's resilience. Culture is relevant for sustaining learning; for instance, in the Nso community, Wiisahnyuy and Ngalim (2023) found that folktales are a core component of indigenous pedagogy, and they stimulate and enhance cognitive skills and moral development in learners. Traditional songs, games, folktales and dance equip learners to acquire language, speech therapy and other literacy skills (Omolewa, 2007; Osaat & Asomeji, 2017). Vygotsky (1978) highlights how inter-psychological processes that occur when children interact with others in local activities determine the meta-cognitive and learning abilities of a child. The quality of interaction that characterise children's engagement in local activities influence learning and emotional regulation.

Most of these studies were not carried out in the context of adversity where traumatic experiences, loss of learning, overcrowded classrooms exacerbate learning difficulties. The current project builds on existing models such as Teaching at the Right Level (TaRL) that has been successful in some parts of Africa like Zambia. However, it provides an integrated approach of both literacy and resilience. It also leverages on data from diagnostic assessments of children to build a co-created intervention with key stakeholders and internally displaced children.

The context of crisis in Cameroon

The study was carried out in Cameroon. Cameroon can be described as a bilingual and multicultural African country with dire implications for the school system. The educational system can be described as having two-sub systems including the English and French sub-system of Education. Primary education last for 6 years and is divided into three levels including level 1 (grade 1 and 2); level 2 (class 3 and 4) and level 3 (class 5 and 6). There are several private and government schools. However, the government schools are tuition free making it the most populated when compared to private schools. In the English-speaking regions of Cameroon, consisting of the South West and North West regions, there have been an ongoing armed conflict since 2016. This conflict is between an armed group referred to as separatist fighters and the government. This has resulted in the burning down of schools, killing of teachers, pupils, school administrators and parents. Most government schools have attracted severe damage yet it remains the most solicited by internally displaced children. With more severity in rural areas, many of these children move to urban areas considered relatively safer. Again, most have lost at least a year of schooling, compounding challenges of low literacy rates. For many of these internally displaced children, going back to school is a step in the right direction but in the absence of targeted support, there is an increased likelihood to fall behind with detrimental and pervasive effects throughout life. It is in this context of crisis and adversity that the study set out to assess the effects of Culturally Enhanced Activity Approach (CEAA) in enhancing learning outcomes of internally displaced children in Cameroon. Through the project, the CEAA intervention was built with the desire to assess its specific effects framed through 7 core questions:

1. What is the impact of culturally enhanced local games on the development of literacy and resilience in internally displaced pupils?
2. What is the impact of culturally enhanced folktales on the development of literacy and resilience in internally displaced pupils?
3. What is the impact of culturally enhanced local songs on the development of literacy and resilience in internally displaced pupils?
4. What are the gender effects of CEAA on the development of literacy and resilience skills in internally displaced pupils?
5. How sustainable are the effects of CEAA in the development of literacy and resilience skills in internally displaced pupils?
6. What is the impact of CEAA on learning outcomes of internally displaced pupils?
7. What are teachers' perceptions of CEAA in enhancing the development of literacy and resilience skills in internally displaced pupils?

Methods

The project adopted an embedded quasi-experimental design that allowed for observational study of children's play activities and quantitative measures of children's literacy and resilience. The qualitative findings were embedded in the quantitative findings and used to develop an intervention in a participatory and consultative process with pupils, teachers, parents, school heads and community leaders. Children were engaged in 21 sessions of enhanced local activities including songs, games and folktales. Each session lasted for 2 hours with 2 sessions per week across 4 weeks. For the intervention, each child was given an affirmative name (enhancement for resilience) created from the first letter of his or her traditional name. For instance, a child with the name, Sakwe was called Smart Sakwe. Other affirmative names included Amazing, Majestic, Great, etc. Each session consisted of engaging in one of the activities using local tools and materials repetitively (see box 1 for sample session plan).

Box 1: Sample song activity for one session

<p>Song 1</p> <ul style="list-style-type: none"> • Small thing pickam 60mins 	<p>Space</p> <ul style="list-style-type: none"> • Clear outdoor area for running 	<p>Materials</p> <ul style="list-style-type: none"> • Coloured bold markers (5-10 inches) • Letter dice (10-20) 	<p>People</p> <ul style="list-style-type: none"> • Vowel dice (1 cube) • White papers (10 sheets) • 7-14years old • Boys and girls • 3+ players
<p>Activity Description</p> <p>A literacy and resilience enhanced local song amongst children song in a group while picking up word litters from the environment.</p> <p>Reading: Phonemic Awareness (LRPh); Phonics (LRPhc); Fluency (LRF); Vocabulary (LRV);Comprehension (LRC)</p> <p>Spelling: Vowels (LSV); Consonants (LSC); Diagraphs (LSD); Blends (LSB); Inflected Endings (LSI)</p> <p>Resilience: Equanimity (RE); Purpose (RPu); Perseverance (RPe); Self-reliance (RS); Authenticity (RA)</p>			
<p>Preparing the stage: 10mins</p>			
<p>Activities</p> <ul style="list-style-type: none"> • Each child introduces themselves using their affirmative names (RS; RPu). • Parents and teachers will each take turns to introduce themselves using affirmative names (RS; RPu). • Researchers provide a description of the activity with clear rules, regulations and guidelines 	<p>Specific Objectives</p> <ol style="list-style-type: none"> 1. To develop a sense of self-reliance and purpose 		

Process: 40mins

Activities

- Children make words and letters with papers, beer cocks, leaves, grass, and bamboos in small groups guided by researchers (LSV, LSC, LSD, LSB, LSI)
- Mix them up and throw in an open space.
- Sing the song while picking up the letters and words and reading them aloud (LRPh, LRPhc, LRF, LRV, LRC)
- The children will sort out and pick up letters or words while singing in a group (RE) and attempt to read them rather than dirt in the original activity.

Specific Objectives

2. To practice the spelling of words
3. To improve reading fluency, vocabulary and comprehension
4. To promote purpose and perseverance

Song

Lead singer: *Small word* 2x

Response by all: *Readam (RPu)* 2x

Lead singer: *Small small word* 2x

Response by all: *Readam (RPu)* 2x

Lead singer: *All bend down* 2x

Response by all: *Whether we go read and write today (RPe)* 2x

Closing: 10mins

Activities

- Children will be required to create 3 words made out of a combination of letters crafted on plastic bottle lids or any other local material (LRPh; LRPhc; LRF; LRV; LRC)
- Children and their parents will write out a sentence describing their most memorable experience of the session with the child mastering the spelling of all words in the sentence (LR; LS; R)
- Children re-group. They call out each other's affirmative names with hugs across their teachers and parents

Specific Objectives

5. To promote phonics and phonemic awareness
6. To promote fluency, vowel and consonant use
7. To sustain literacy and resilience skill development

After the intervention quantitative data was collected from children and qualitative data from parents, teachers and head teachers to measure changes. A follow-up measure was carried out 10 months after the post-test to establish persisted gains. Overall, the methods employed, allowed for the measurement of intervention effects across time (pretest, post-test and sustainability) and group (treatment and control group).

Sample

Data was collected from 190 internally displaced children and 19 stakeholders (including 2 head teachers, 6 parents and 11 teachers) at different phases of the project. At the pretest phase, 190 internally displaced children were included in the study. The Regression Discontinuity Design (RDD) was used to introduce cut-off points that served as the eligibility criteria. The eligibility criteria included (1) largest reading gap (2) scoring below a threshold of 24 for the spelling inventory and (3) with a resilience score 35 and below. At the end of the pretest, 58 least performing children who met two or all of the eligibility criteria were assigned to both the control (29) and the treatment group (29). To avoid cross-breeding and manage intervention effects, each school was randomly assigned a specific activity with 10 children for both the songs and games group and 9 children for the folktales group with equal numbers for the control group. The final intervention sample of 58 children aged 7-15 years in class 3 and 4 included 50% girls and 50% boys. The stakeholders included 89% females reflecting the broader presence of female teachers and head teachers as well signalling more involvement of mothers and female guardians in the education of their children.

Measures

The study included both qualitative and quantitative measures for both literacy and resilience. Qualitative measures including an observational guide focused on observing literacy and resilience components in play was used before the intervention. Observation included 24 sessions across 2 weeks with 12 sessions weekly. Findings were embedded in the design of the intervention and after the intervention, 19 one-to-one interviews were conducted with head teachers, teachers and parents to ascertain perceived changes in literacy and resilience.

Three quantitative measures were used including the Burt Fixed Reading Test developed by Gilmore and colleagues in 1981 used to measure reading. The reading test was administered individually and consist of reading aloud 110 words arranged in rows of 10 words with increasing difficulty. For spelling, the Word their Way spelling inventory specifically the Primary Spelling Inventory (PSI) was employed. The inventory consists of 26 words testing for initial and final consonants (in words such as fan, pet, etc.); short vowels (in words such as gum, sled, etc.); digraphs (in words such as shine, coach, etc.); blends (in words such as stick, dream, etc.); common long vowels (in words such as hope, wait, etc.); other vowels (in words such as chewed, crawl, etc.); and inflected endings (in words such as clapping, riding, etc.). The final test was Resilience Scale 10 used to measure resilience consisting of 10 items measuring 5 core characteristics including purpose, perseverance, self-reliance, authenticity and equanimity. The 4-item response options included not at all like me; not much like me; somewhat like me; a lot like me ranging from score 1-4 respectively.

Data Analysis

Qualitative data was analysed using the reflexive thematic analysis proposed by Braun and Clarke (2022) that allowed for deep reflections and creation of meaning in to how enhanced local activities influences literacy and resilience development. This included transcription and familiarization of the data using *otter* transcription software. Initial codes were generated through an inductive process across the 2 researchers and 3 research assistants which were reviewed and used to develop themes.

Quantitative data was processed and further analysed using SPSS 25.0 and R version 4.5.1 and Excel for data visualization. Means and standard deviations were used for describing the data and inferential statistics included Difference in Difference as well Analysis of Covariance (ANCOVA). All computations were at 95% Confidence Interval and 0.05 level of significance. Partial effect sizes (η^2) are also reported. A standardized score for literacy was obtained by standardising both reading and spelling scores. Overall reading score obtained from the number of words correctly read were used to compute reading performances. For spelling, feature points representing different phonemes were used to compute spelling performances and the overall score of resilience sub-characteristics was used to measure resilience.

Ethical Considerations

The study gained ethical approval from the Faculty of Health Sciences at the University of Buea referenced 2024/2426-02/UB/SG/IRB/FHS. Individual assent and consent forms were completed by all participants and necessary approvals obtained from the community stakeholders as well as the delegation of primary education. As the study involved a specific sub-population of least performing internally displaced children, all attempts were made to ensure that no labels were assigned to the participating children through training of all research assistants, researchers and other stakeholders involved. Data collected has been safely stored and names replaced with codes to avoid tracing back the results to specific participants. Pictures and videos obtained with consent were originally taken in a way in which the participant could not be identified.

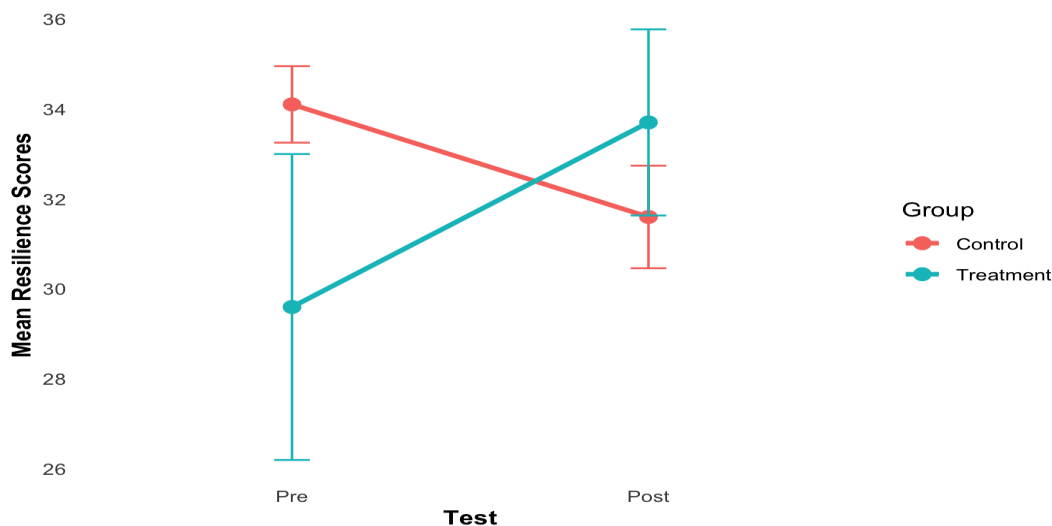
Findings

Data presented here is based on the core questions of focus for the CEA project.

Enhanced Local Games Significantly Improves Resilience but not Literacy

Culturally enhanced local games significantly improve resilience but not literacy. Children in both groups – control ($x = 34.10$) and treatment ($x = 29.60$) showed very low resilience rates at the baseline. However, the resilience rates for children in the control group were higher but after the intervention, the treatment group made significant progress. After the intervention (at post-test), children in the treatment group ($x = 33.70$) improved by four points on average while the control group ($x = 31.60$) experienced a slight drop as presented in figure 1.

Figure 1: Mean Resilience Scores Across Group and Time Using Games



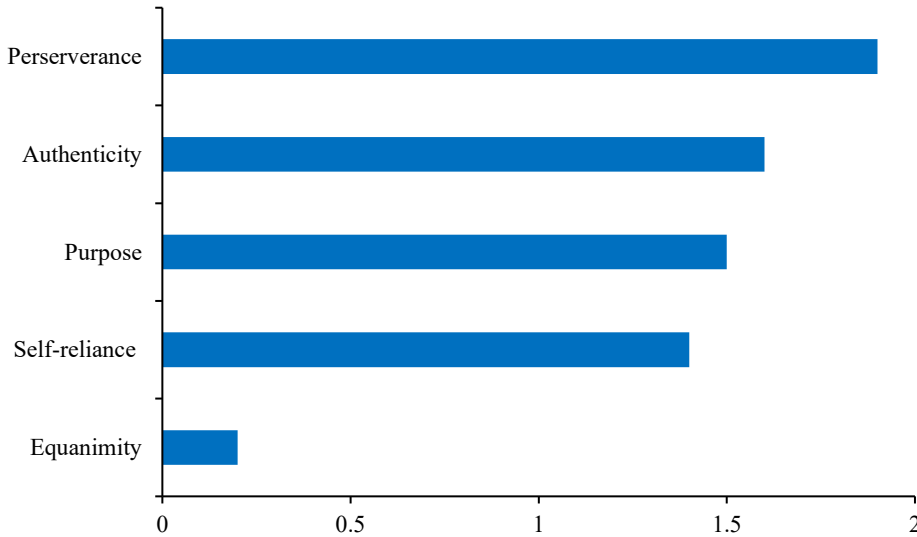
$$F(1, 20) = 4.736, p = .044, \eta^2 = .218$$

Figure 1 indicates that the intervention had significant ($p = .044$) and large effects ($\eta^2 = .218$) on the resilience score of the treatment group. Improvements in resilience persisted even to the follow-up phase and the effects remained significant ($p = .044$) in favour of the treatment group. Effects remained large though reduced compared to post-test ($\eta^2 = .124$). Culturally enhanced local games significantly improve resilience of internally displaced children rejecting null hypothesis 1 in relation to resilience that suggested that enhanced local games have no significant impact on resilience skills of internally displaced children.

Furthermore, when changes in resilience sub-skills were analysed, it was found that intervention had positive effects across all resilience sub-skills. However, largest effects

were made in accentuating children's perseverance followed by authenticity, purpose and self-reliance with the least improvements on equanimity as presented in figure 2.

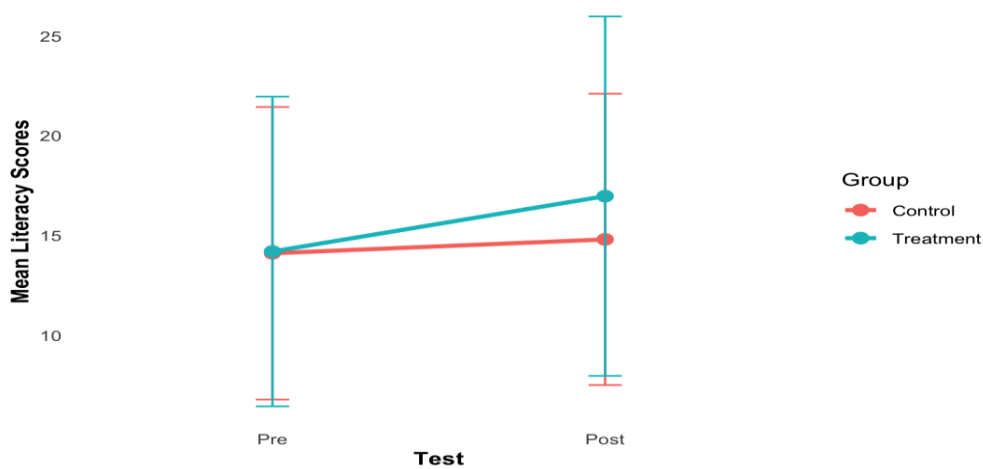
Figure 2: Positive Effects of Games on Resilience Sub-Skills



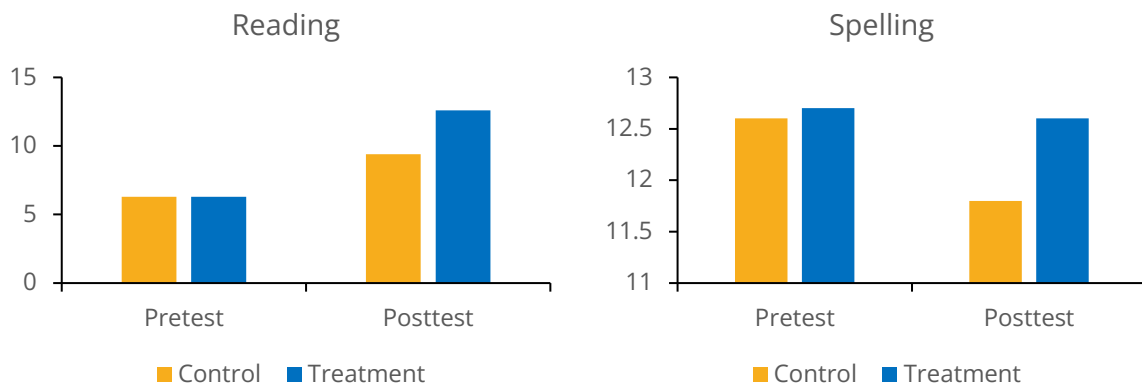
Children in the treatment group showed a developmental gain moving from the emerging to the developing stage characterized by growth and becoming that allows the child to become more noticeable. As indicated in figure 2, the most impact was in the area of perseverance where children's ability to finish what they begin and persistence with difficult task was improved.

On the other hand, while the use of games showed improvements, when compared to the control group, changes were not significant. Games had no significant effects on literacy, reading and spelling as presented in figure 3.

Figure 3: Effects of Games on Literacy across Group and Time



$F(1, 20) = .773, p = .392, \eta^2 = .043$



$F(1, 20) = 2.083, p = .167, \eta^2 = .109$

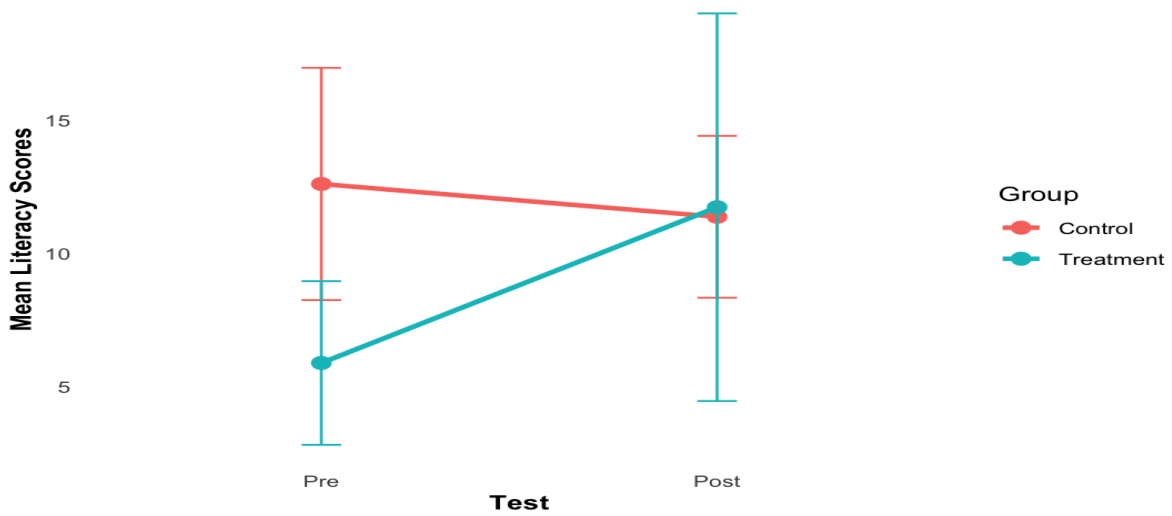
$F(1, 20) = .133, p = .720, \eta^2 = .008$

Figure 3 shows slight improvements in literacy for the treatment group over the control group when games were employed. Overall, these differences did not meet statistical significance ($p = .392$). Gains were equally witnessed when reading and spelling effects were analysed. However, it is worth noting that analysis of the reading gap showed that after the intervention, the use of games reduced reading gap for the treatment group overall by 1 year 9 months. When adjusted considering the gains in reading gaps made by the control group of 1 month, findings indicate that an overall gap of about 1 year and 8 months has been reduced with the use of games.

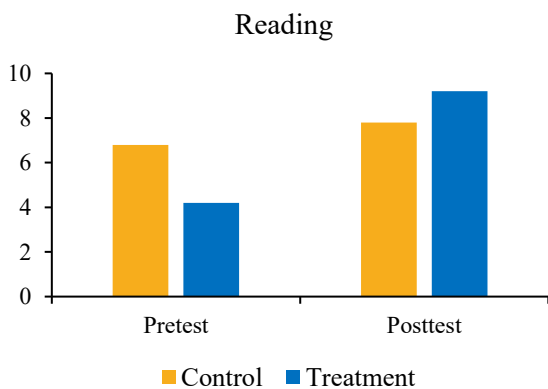
Enhanced Folktales Improves Literacy and Resilience but Effects are not Significant

Folktales constituted of telling locally enhanced tales and analysis of the outcomes showed improvements but these improvements did not meet statistical significance as presented in figure 4.

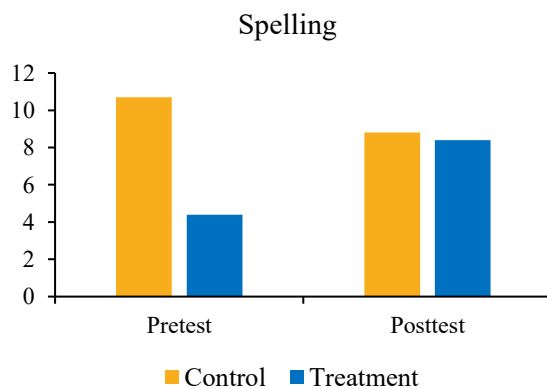
Figure 4: Mean Score of Literacy based on Folktales across Group and Time



$F(1, 18) = 1.786, p = .201, \eta^2 = .106$



$F(1, 18) = 4.283, p = .056, \eta^2 = .222$

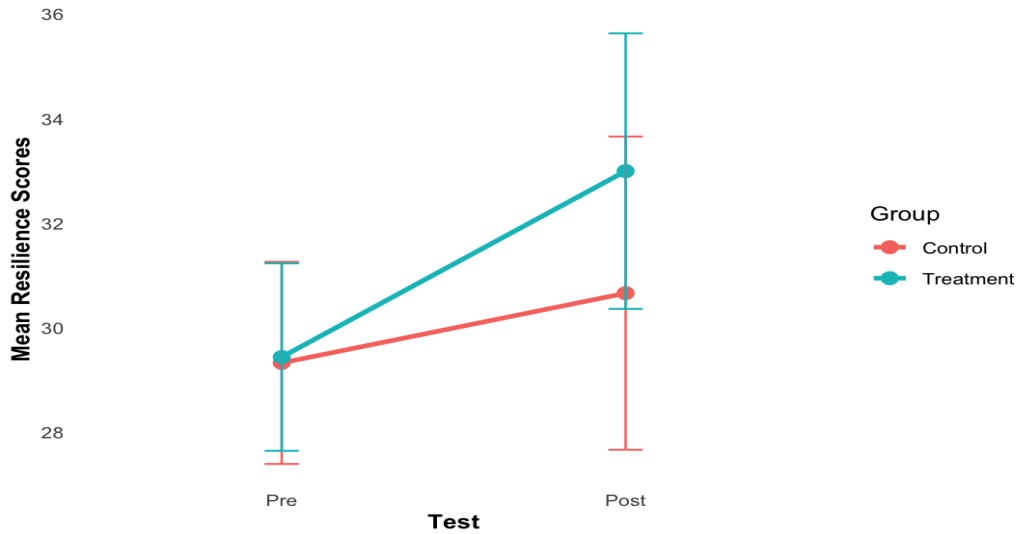


$F(1, 18) = .236, p = .634, \eta^2 = .016$

Figure 4 shows improvements in literacy for the treatment group but when compared to the control group, the difference was not significant accepting the null hypothesis indicating that folktales have no significant effect on literacy. Literacy specific effects for reading and spelling showed improvements as well but non met significance. Worthy of note is the fact that while the reading gap for the control group expanded on average by 1 year 5 months, the gap declined for the treatment group by 1 year 6 months showing positive gains of using folktales in literacy development.

Effects of folktales on resilience showed a similar trend showing improvements across time for both groups but the improvement for the treatment group when compared to the control group did not meet statistical significance as presented in figure 5.

Figure 5: Mean Score for Resilience using Folktales

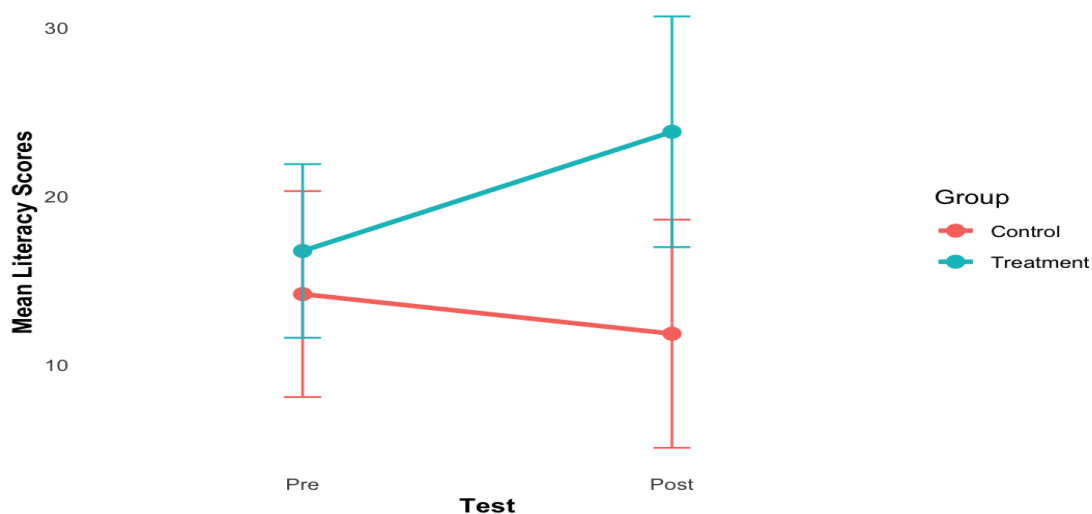


$F(1, 18) = 1.293, p = .273, \eta^2 = .079$

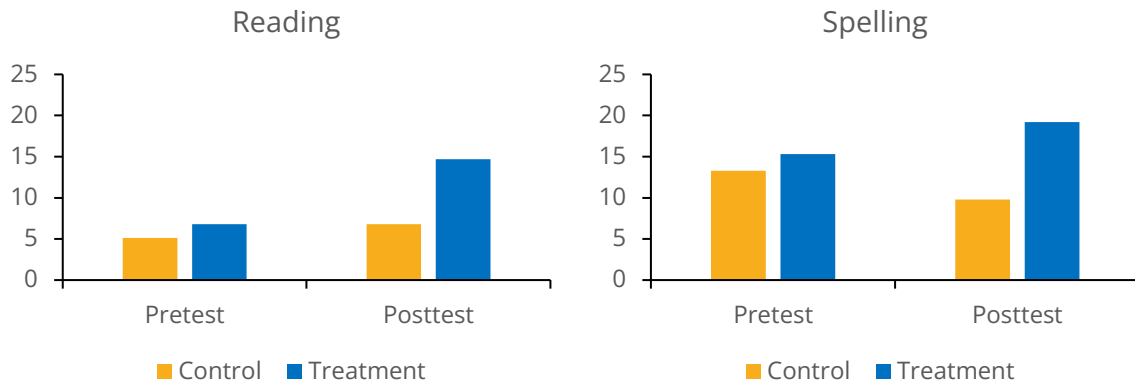
Enhanced Local Songs Significantly Improves Literacy (but not resilience) with Larger Effects on Spelling than Reading

Culturally enhanced local songs significantly improve literacy but not resilience. Children in both groups started at similar points with the literacy scores for the control group ($x = 14.19$) slightly lower than the treatment group ($x = 16.75$). Post-test analysis showed gains for treatment group ($x = 23.82$) compared to the control group ($x = 11.84$) as presented in figure 6.

Figure 6: Mean Literacy Scores Across Group and Time Using Songs



$F(1, 20) = 10.634, p = .005, \eta^2 = .385$



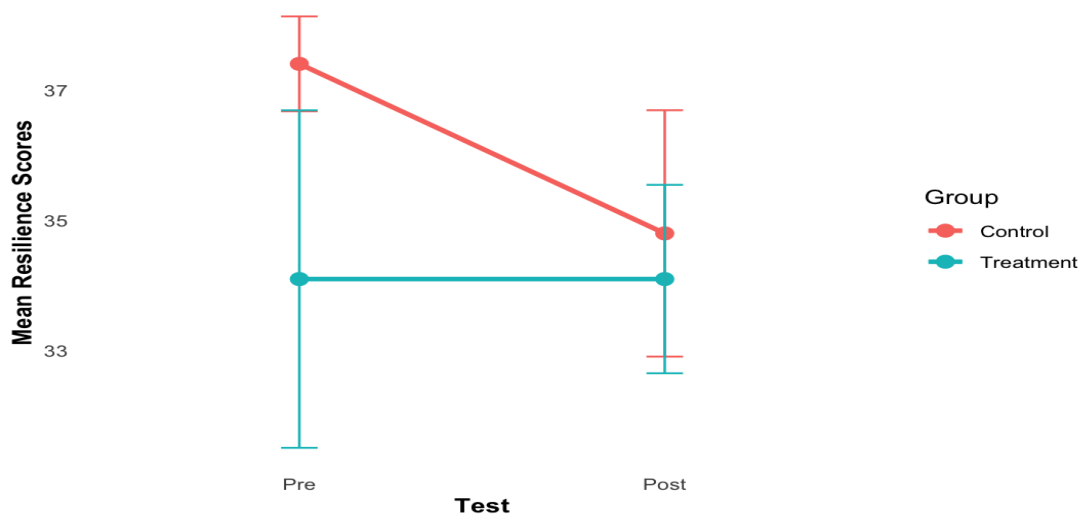
$F(1, 20) = 4.707, p = .045, \eta^2 = .217$

$F(1, 20) = 10.147, p = .005, \eta^2 = .314$

Figure 6 shows an improvement in the treatment over the control group. When pre-test scores were adjusted, these differences were found to be statistically significant ($p = .005$) with large effects ($\eta^2 = .385$) of songs on literacy. In addition to this, songs had specific and significantly large effects for reading and spelling independently. By post-test, children in the treatment group were able to read about 15 words correctly compared to about only 7 words on average before the intervention. Spelling gains were higher with attempts made on spelling about 19 feature points correctly compared to an initial 15 feature points. These improvements were statistically significant with only about a 5% chance of error. Further analysis showed marked improvements in the use of final consonants, initial consonants and diagraphs for spelling.

On the other hand, no changes were witnessed with resilience as presented in figure 7.

Figure 7: Mean Score for Resilience across Groups and Time using Songs



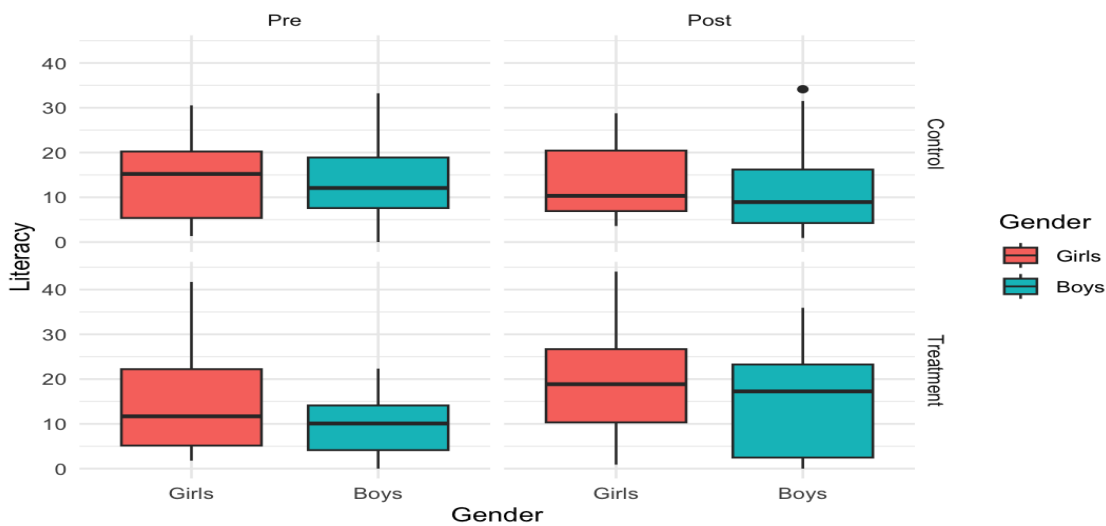
$F(1, 20) = .255, p = .620, \eta^2 = .015$

Figure 7 shows an almost stagnant resilience score for the treatment group with a drop for the control group. When both groups were compared, there was no significant difference resulting in the acceptance of the null hypothesis stating that there is no significant effect of songs on resilience.

Enhanced Local Activities Significantly Drives Literacy and Reading Gains for Boys While Boosting Spelling Gains for Girls with no Gender Differences in Resilience

Combined effects of culturally enhanced activities show a significant improvement in literacy especially for boys as presented in figure 8.

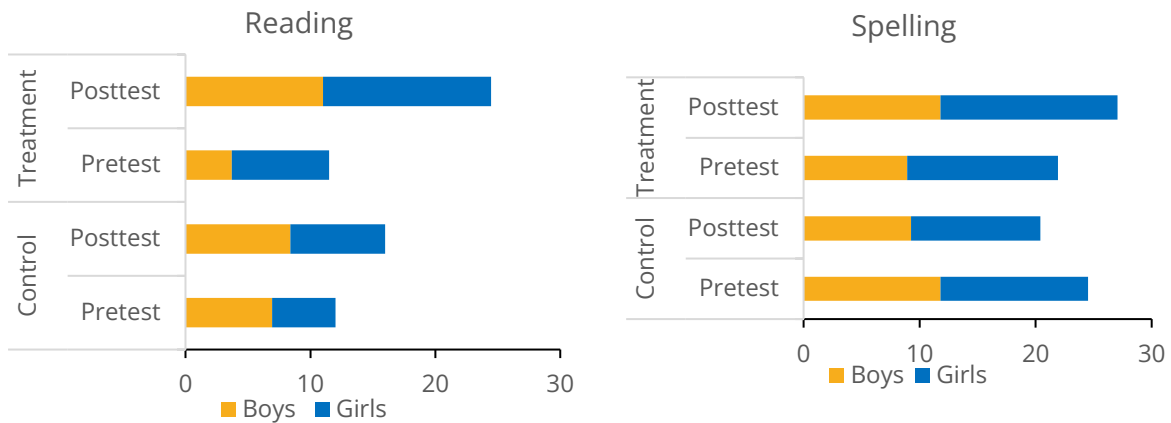
Figure 8: Box Plot Showing Significant Literacy Improvements more in Boys



$$F(1, 58) = 11.211, p = .002, \eta^2 = .199$$

Figure 8 shows improvements in the treatment group for both boys and girls. However, the gains were higher for boys and this difference was statistically significant when adjusted means were used. Specific effects differ for reading and spelling. Boys showed significantly greater gains in reading while girls showed significantly greater gains in spelling as presented in figure 9.

Figure 9: Mean Reading and Spelling Gains Across Groups and Time based on Gender



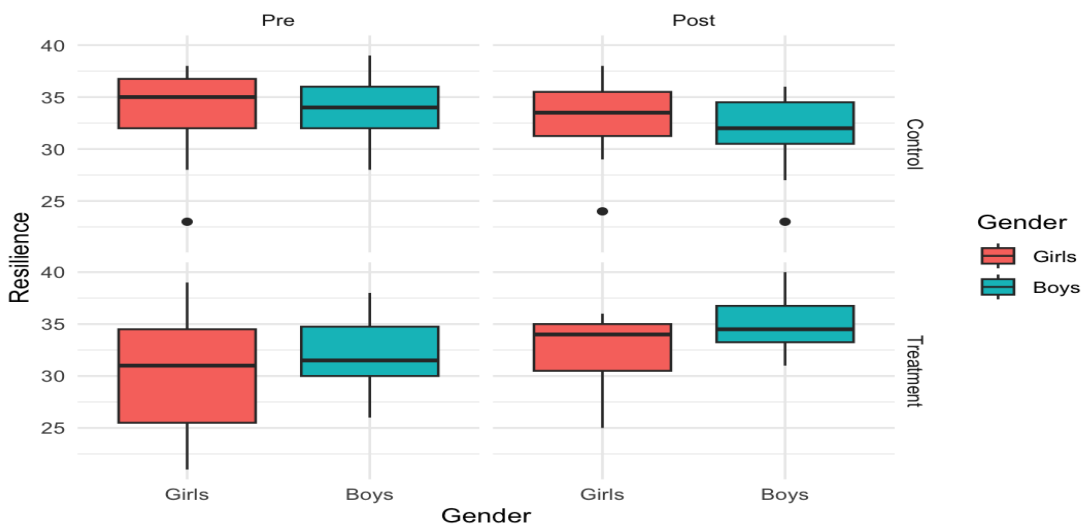
$F(1, 58) = 9.633, p = .003, \eta^2 = .176$

$F(1, 58) = 234.396, p = .011, \eta^2 = .137$

Figure 9 indicates improvements particularly for boys for reading and girls for spelling. When means were adjusted and further tested, these differences were significant. Independent effects of the enhanced activities showed significant effects of songs on literacy ($p = .007, \eta^2 = .396$) and spelling ($p = .007, \eta^2 = .398$) outcomes for boys over girls.

On the other hand, gender differences in resilience were minimal and not significant as presented in figure 10.

Figure 10: Gender Differences in Resilience Across Groups Over Time



$F(1, 58) = 3.572, p = .065, \eta^2 = .074$

Figure 10 shows improvement for boys in the treatment group over time. However, these differences were not statistically significant.

Literacy and Spelling effects endure with songs while resilience endures with combined activities, games and folktales

Enduring effects of the intervention showed positive and significant improvements across literacy and resilience. However, specific activities resulted in specific outcomes as summarized in Table 1.

Table 1: Significantly Enduring Effects of the Use of Culturally Enhanced Activities on Literacy and Resilience

Outcome measures/Activities		CEAA	Songs	Games	Folktales
Literacy		✗	✓	✗	✗
	Reading	✗	✗	✗	✗
	Spelling	✗	✓	✗	✗
Resilience		✓	✗	✓	✗

Table 1 indicates that songs were more supportive in the improvement of spelling ($p = .013, \eta^2 = .206$). Resilience is more supported when all these activities are combined ($p = .008, \eta^2 = .078$) and when children are engaged specifically in games ($p = .044, \eta^2 = .124$) and folktales ($p = .040, \eta^2 = .153$).

Combined Effect of Songs, Games and Folktales Significantly Improves Literacy but not Resilience

Songs, games and folktales show a combined statistically significant effect in improving literacy. Changes in resilience were positive but not significant. The combined effect of these enhanced activities showed greater gains in reading than spelling as presented in figure 11.

Figure 11: Combined Effects of Enhanced Activities on Literacy

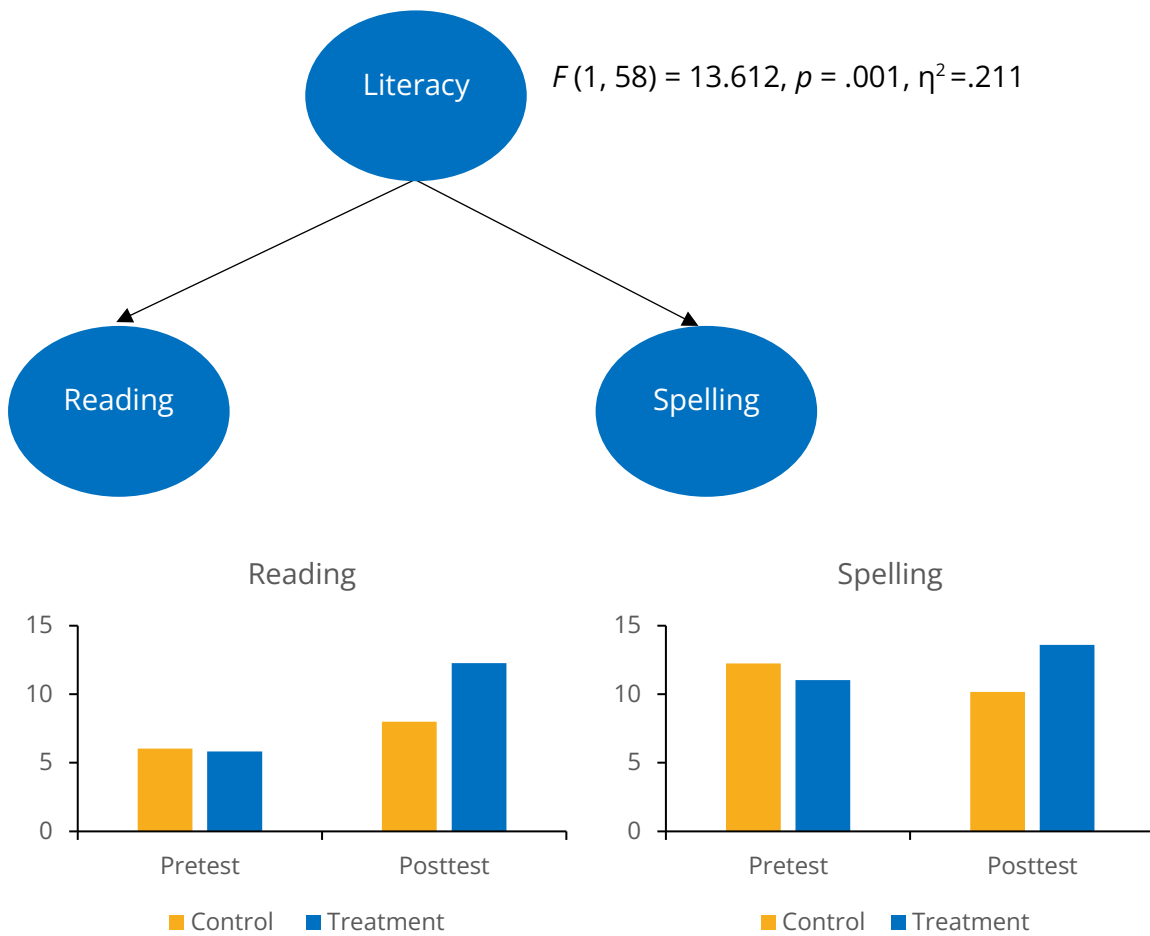


Figure 11 indicates an overall statistically significant improvement of literacy using enhanced activities with specific effects for reading and spelling. These quantitative findings were in line with the qualitative findings from parents, teachers and school heads indicating a positive experience of CEAA aftereffects in the classroom and at home.

Stakeholders hold Positive Perceptions related to CEAA Effects

Analysis of one-to-one interviews with stakeholders revealed four core themes highlighting literacy improvements observed across classrooms and at home as presented in figure 12.

Figure 12: Literacy Improvements Perceived by Stakeholders

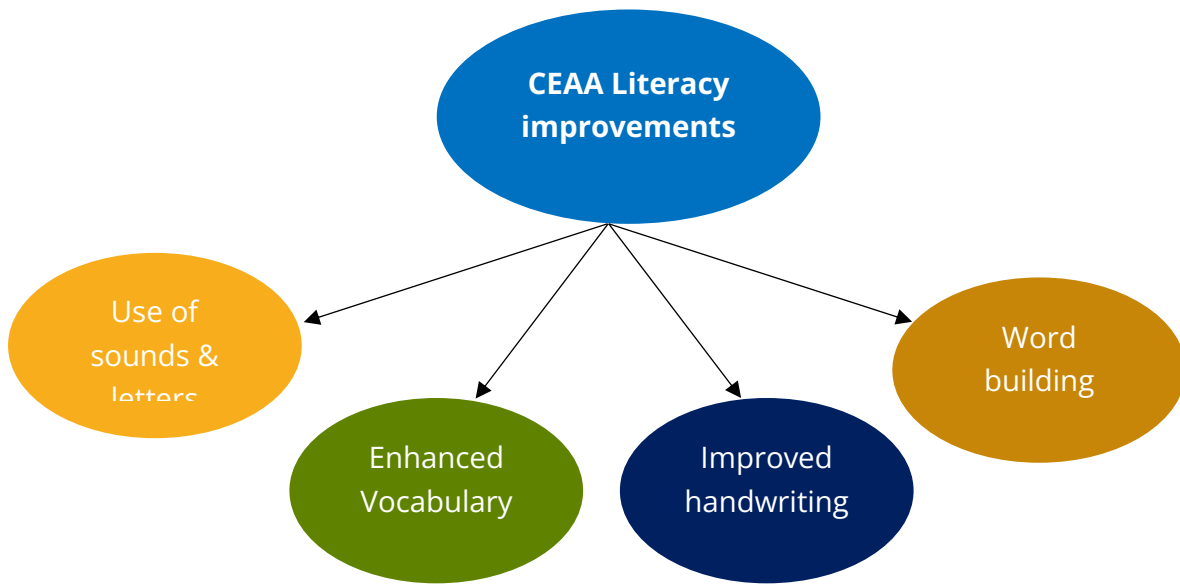


Figure 12 presents four core themes capturing stakeholders' view of the effects of using culturally enhanced activity approach for literacy development. Stakeholders perceived improvements in the use of sounds evident in pupils' ability to identify sounds, associate sounds to letters – skills not evident before the intervention. Improvements were also perceived in the area of vocabulary evidenced in pupils improved pronunciation, communication and language use. Both parents and teachers noted that the pupil's pronunciation had improved and children can now use this ability to communicate effectively. Findings also revealed that the intervention had a positive effect on children's handwriting in three subtle ways including differentiating case letters; increased speed in writing and taking up writing initiatives. Finally, children's improved literacy was evident in the area of word building particularly in the recognition and use of diagraphs (see box 2 for sample quotations).

Box 2 What did Stakeholders Say?

Use of sounds

"When it comes to spelling and writing, following our sounds, there is an 80% improvement (T2)".

Enhanced vocabulary

"At first, he did not speak English but now he is interested in speaking English even when his friends visit (P2)".

Improved handwriting

"They have improved on their handwriting. Their handwriting skill has really improved like ...the ... You know, ... used to write at times she will leave this page to this other side (T8)"

Word building

So, I have realized a great increase in the academic performance, especially in sound and word building. For example, when I taught the "sh" and the "ch" sound, they had difficulties on it, but introducing the local games now, ... (name removed) can spell most of the words with those sounds as well as ... (name removed) [T5]"

Beyond literacy, resilience effects were also positively recorded by stakeholders depicting five core themes as presented in figure 13.

Figure 13: Observable Core Changes Related to Resilience in School and at Home

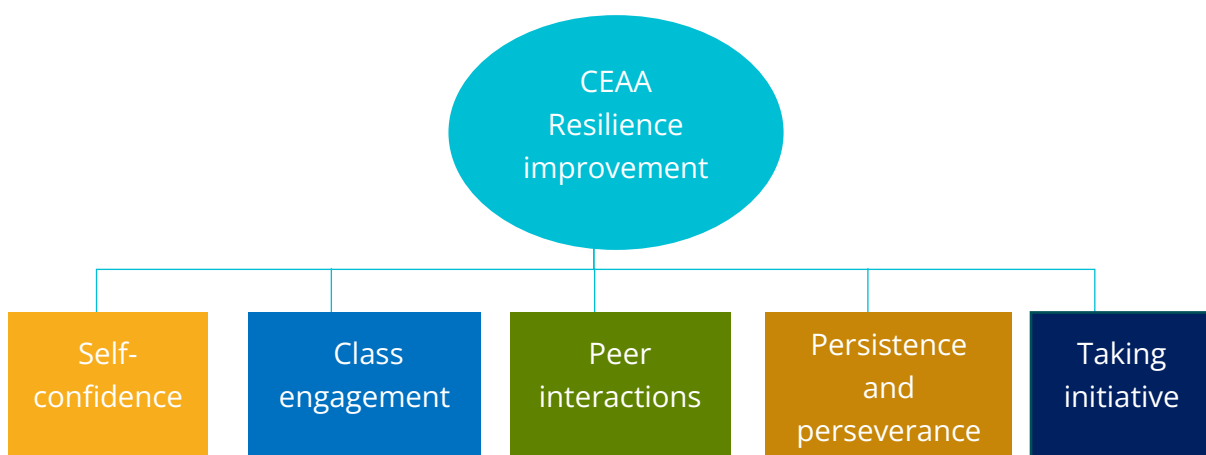


Figure 13 indicates that stakeholders observed improvements across 5 core areas including increase in self-confidence, classroom engagement, peer interactions, persistence and perseverance and initiative taking. According to stakeholders, participation in the intervention resulted in improved ability for children to be self-confident expressed in freedom of expression, enthusiasm, zeal and boldness. Changes were also observed in the area of class engagement as children were reported to have become more active and engaged in classroom activities. This was captured through three sub-themes including being more active; more disciplined and improved attention.

Resilience development was also witnessed through improved peer interactions evident in children's ability to share and work in teams; improved cordiality, respect and socialisation. Improved peer interactions have resulted in more communal behaviours such as sharing.

Beyond improved self-confidence, increased classroom engagement and peer interactions, persistence and perseverance in completing task was a key change observed by various stakeholders. Children were determined to succeed and persisted with a task to completion as noted by the stakeholders. Parents particularly observed that children will make extra efforts to go through their task to completion.

Finally, the interventions were also effective in helping children take initiative evident in problem solving and initiating opportunities. Parents observed changes in this area the most. Children were reported initiating learning opportunities not just for themselves but also for others as depicted in the intervention.

What stakeholders say

Self-confidence

"...that child was so timid even to talk, he cannot even talk. But now I have seen that even the way he interacts now with the friends (T4)".

Class engagement

"...will never put her hand up but now when I was asking for anybody to give a word. I saw how she gave the word 'eat', and I was so impressed (T1)".

Peer interactions

"Those who used to sit in one corner, like disturbed, like wondering, loneliness, but now you see them play with others (HT1)".

Persistence and perseverance

"At first, when you ask him a question, he will burst out to tears but now he would try to talk and does not cry – *translated form pidgin English* (P3)".

Taking initiatives

"Unlike before, where he comes back to the house and he always want to play, I see him taking some slippers in the house, writing the alphabet and going with his friends outside that they should play dodging. And then asking one person to spell church, this person to spell bread (P4)

Discussion

Songs had the most significant effects on overall literacy and its sub-skills including reading and spelling that endured over time. This finding is consistent with that of Davis (2017) which established a positive effect of songs on literacy. Certain highlighted characteristic of songs holds the potential to enhance cognitive skills. For instance, Cooper (2010) argued that the repetitive characteristic of songs increases attention and engagement, necessary for accomplishing cognitive task such as literacy. Schön et al. (2008) further notes that the sounds and pitch of a song enhance phonological and linguistic functions. The rhythmic nature of songs aligns with the learning of sounds that is critical in reading and spelling. The current intervention extends this notion in literacy development of internally displaced children. The findings establish that the use of songs is a pedagogical asset that can be intentionally used to design literacy lessons. It is worth noting that the songs used here are local songs, familiar to the children meaning that teachers can creatively adopt such songs into their classrooms without relying solely on digital songs or western songs that becomes far expensive to adopt in fragile context.

Games significantly impacted resilience with enduring effects over time. This finding of games supports previous findings on positive effects of traditional games on social and emotional skills (Özcan & Sakız, 2025) to which resilience is a component. Game structure provides a competitive opportunity bounded by rules and goals that allows children to display and develop their inner strengths. Hromek and Roffey (2009) argued that the physical coordination required to participate in games releases undue stress that improves the overall psychological state of individuals. In cases of adversity, where children have absorbed all types of stressors ranging from displacement, adjusting to new environments, poverty, etc., games allow children to unwind, facilitating a positive interaction between peers and their environment. Games therefore serve as a critical pedagogical tool for enhancing resilience in conflict-affected areas. However, our findings show that games are weak in improving literacy skills when used independently.

Folktales though not significant, improved literacy and resilience among internally displaced children. This aligns with Wiysahnyuy and Ngalim (2023) findings that folktales stimulate and enhance cognitive skills and moral development in learners. Folktales cultivate empathy and emotional resilience in children. When children who have experienced adversity listen to stories where characters experience difficulty and later triumph, they tend to make meaning out of difficult experiences and then, internalize positive and adaptive behaviours. The role of folktales in improving literacy were reflected in the findings of Yusuf (2016) which showed significant improvements in the reading comprehension skills of children whose teachers used folktales in teaching. Additionally, folktales have been perceived as something that facilitates language acquisition, speech therapy and other literacy skills (Osaat & Asomeji, 2017). Policies

that support the inclusion of storytelling and local folktales in the curriculum are vital for literacy enhancement. This will be particularly relevant and more instrumental in remedial instruction for low performing children that have experienced adversity. Also, school programs like clubs and community programs such as religious and culturally based group activities should use folktales to nurture resilience in crises affected areas.

Research (Mullis, 2007; McGeown et al., 2012) has consistently showed that girls perform better than boys in literacy related aspects especially reading. This is contrary to our findings which showed that boys performed better in literacy overall. Specifically, while boys performed better in reading, girls outperformed them in spelling. However, Johnston et al. (2012) found that the method of teaching is what accounts for gender differences. When children are taught how to read using the synthetic method which constitutes of teaching individual sounds (phonemes) and then further taught on how to sequentially blend these sounds to read words, boys perform better than girls. Boys are less attentive, so when this synthetic method is used, it allows boys to focus their attention (Logan and Johnston, 2010). This explains the gender differences found in our intervention in favour of boys. More work is required to focus on strategies needed to support significant improvements for girls. No doubt, girls also showed significant improvements in spelling consistent with the findings of Allred (1990) who found that girls performed significantly better than boys in spelling.

Recommendations

The findings point to several key modifications and changes that can improve the state of learning for children in adversity.

The Ministry of Basic Education needs to emphasise the use of play-based and local activities in the curriculum

The Ministry of Basic Education in Cameroon revised the curriculum of primary schools in 2018. In this revision, play-based learning was emphasised. However, suggested methodology across specific subjects and content areas only highlighted role-play and dramatization. This has the potential to limit the use of other play-based approaches such as songs, games and folktales in the classroom. Songs can be used to teach reading and spelling owing to its unique attributes to provide sounds, rhythms and pitch that equally characterises literacy development. Games and folktales show a marked ability in enhancing resilience necessary for providing a fertile learning context for literacy. The teaching of children particularly children who have undergone traumatic experiences must allow for creativity aimed at limiting stress and facilitating learning. In this light, the Ministry of Basic Education needs to revise the curriculum to emphasise the use of these play-based and local activities.

The Ministry of Basic Education needs to adopt a data-centric approach for literacy development annually

Boosting the use of creative pedagogies such as a play-based learning must be based on an understanding of children's level and the gaps to be filled. When done in isolation, the effects are trivial. During the admission of internally displaced pupils, a diagnostic test needs to be carried out to identify the key challenges that the child is facing in order to provide targeted support. Policy guidelines can support this practice in schools. This would require that school heads including teachers organise opportunities during admission to understand the child. Such data would be at the center of decision making as was the case with the CEEA intervention that was built out of a diagnostic evaluation of children's specific reading, spelling and resilience gaps.

School heads need to create professional learning communities as spaces for continuous reflection and creativity

The use of local activities requires creative insights to accentuate its benefits. Such efforts must be participatory allowing researchers, school stakeholders, parents and community leaders to serve as a think tank to creative strategies following the data shared by the school. Adoption could start from the use of social media platforms such as WhatsApp where teachers can share and identify their problems. This community of support can brainstorm on the creative ways to solve the problems. Creativity requires space for reflections in a collaborative and shared space. During this time, assessment data can shape discussions that may continue within the communities all through the year. This would also serve as a professional learning opportunity for all stakeholders involved in the education of children in adversity.

Conclusions

Literacy rates are poor amongst primary school children in Cameroon. However, in the context of internal displacement, the situation is further exacerbated with children experiencing severe challenges in resilience. The project built an intervention focused on using culturally enhanced songs, games and folktales with the aim of improving literacy and resilience scores of 7-15-year-olds in primary 3 and 4 across communities hosting the highest rates of internally displaced children in the South West Region of Cameroon. Songs were most critical in improving literacy including reading and spelling while games and folktales supported resilience development. When these activities are used in combination, the effects are greater. These activities significantly improved the reading scores for boys and spelling scores for girls showing gender differences in the strategies. Literacy and resilience for internally displaced children require targeted support. Policy environments can stimulate actions and practices in schools to sustain improvements. One of such ways is to ensure that local activities are creatively engaged in the classroom, sustained through professional learning communities and a practice

of diagnostic assessments to identify specific areas of improvement for internally displaced children.

Limitations

A key limitation of this mixed method intervention is the relatively small sample size with three sub-groups of at least 19 children each (total number = 59). This modest sample may reduce the overall generalisability of the findings due to reduced statistical power to detect small or moderate intervention effects particularly when comparing sub-groups. As a result, the findings should be interpreted as preliminary. There is need for further studies with larger samples to confirm and generalise these preliminary findings.

Suggestions for Further Research

Further research with larger samples is required to fully capture the variability in literacy and resilience of internally displaced children. Further research may seek to target ways to improve parental involvement as many of the internally displaced children stay with guardians who show little or no interest in their formal education.

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Picture excerpts from field work



Tabala - local game



Reading and spelling using local tools



Small word pickam - enhanced local song



Reading and spelling using plantain leaves



Tum tum belle - enhanced local folktale



Reading and spelling using used cartons