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RESEARCH IN MATHEMATICS EDUCATION

# **Parent Math Training Pilot in Jamaica: Cultural Relevancy Review of the Literacy Connection**

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# Parent Math Training Pilot in Jamaica: Cultural Relevancy Review of the Literacy Connection

## Purpose of the Cultural Relevancy Review of the Literacy Connection

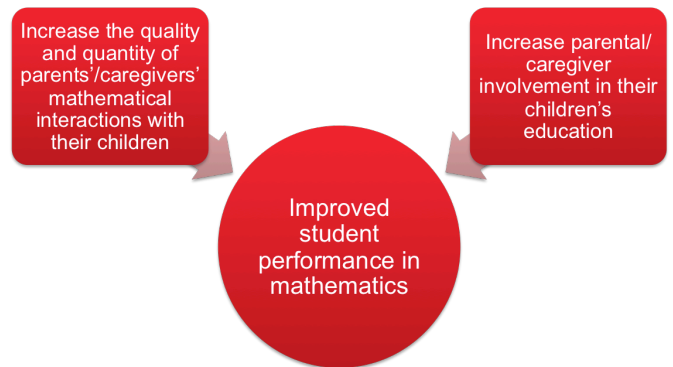
The purpose of this report is to describe the process of reviewing the literacy connection for cultural relevancy, the review process, recommended changes, and reconciled edits to seven children’s books intended for use by Jamaican parents or caregivers with their grade one and grade two children as supplemental learning materials for the Parent Math Training Project.

## Overview of the Structure of the Parent Math Training Pilot in Jamaica Project

### Purpose of the Project

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The purpose of the proposed project is to develop and implement a model for a parental math training pilot in low income communities in Jamaica. The intent of this project is to provide parents/caregivers with a conceptual understanding of key mathematics concepts and skills students in Grades 1 and 2 are expected to be able to know and, via face-to-face parent workshops, train parents/caregivers on how to use learning materials that target these key concepts at home with their children. This project focuses specifically on involving parents/caregivers in home-based learning by providing them with evidence-based mathematics learning materials using research-based strategies to help increase the number and quality of mathematical interactions parents/caregivers have with their children at home.



We proposed to (a) develop evidence-based mathematics learning materials for parents/caregivers to use outside of the school context to support their children’s mathematics skills and understanding, (b) create a set of comprehensive training materials for coaches to support parents’/caregivers’ implementation of the learning materials in their homes, and (c) develop a coherent set of seven face-to-face parent workshops for parents/caregivers that focus on foundational mathematics concepts identified as essential for students in Grades 1 and 2 using resources from the National

Comprehensive Numeracy Programme (NCNP) document – Putting Mathematics into Family Life (PMFL; Jamaican Ministry of Education, 2011).

## **Overview of the Literacy Connection**

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A component of the parent/caregiver materials includes 7 children’s books (one for each workshop) that were created to support mathematical concepts from the Jamaican mathematics standards that are emphasized in each workshop. This component emphasizes the recommendation within the PMFL guide that literacy and numeracy should be seen as domains that complement each other. Mathematics questions were embedded within the story lines of each book to highlight this recommendation.

An experienced author of short stories composed nonfictional and fictional story lines for each book reflecting activities commonly experienced by children in Jamaica. SMU researchers reviewed and made suggestions for modifications to story outlines prior to completion of story drafts. Drafts were then reviewed and leveled to adhere to grade level readability, use of plain language, clarity of illustrations, and plausibility of content.

Books are about 20 pages long with 10 illustrations and about 16 mathematics questions, one per grade level, and are designed to be interesting and culturally appropriate for grade 1 and grade 2 students living in Jamaica. Each book has two leading characters – a Jamaican boy, Ke Vaughn, and his sister, Rasheda – and focuses on how they use math in their everyday lives.

The mathematical questions embedded within the stories were reviewed for accuracy, clarity, and alignment to standards. However, because the stories were rooted in the Jamaican culture and needed to be relevant to Jamaican families, an additional review of the books for their cultural relevancy was considered necessary.

## **External Review**

An external reviewer was selected to review the books for their cultural relevancy to Jamaican families. Cultural relevance and pertinence were important to consider so that families reading the stories would find them interesting and applicable to their lives and culture. The qualifications of the external reviewer, the external review process, and the external reviewer’s feedback is described next.

### **External Reviewer Qualifications**

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The Institute of Caribbean Studies (ICS) at University of the West Indies (UWI) in Mona, Jamaica offers undergraduate and graduate coursework in cultural studies focusing on Caribbean civilization, popular culture, Rastafari studies, music, and entertainment. Director and Senior Lecturer, Dr. Sonja Stanley Niaah, who leads the ICS, was asked to review all 7 books.

Dr. Stanley Niaah's research interests makes her uniquely qualified to provide input on the cultural relevancy of the books. She received her PhD in Cultural Studies from the UWI. Her academic areas of study include: popular culture, cities of performance, old and new black Atlantic performance geographies, and cultural geographies. She has authored two books, six book chapters, and 13 journal articles in research based scholarly publications, with subjects ranging from dance to music to sociological perspectives on dancehall performance, music tourism, and the production of Jamaican celebrity. She is the editor of *ProudFlesh: New Afrikan Journal of Culture, Politics and Consciousness* and is on the editorial board for several other professional journals. She has presented at numerous special presentations, invited lectures, and events, and has been awarded several grants. Selected courses taught include Theory and Conceptualisation of Culture, Caribbean Popular and Creative Culture, Dynamics of Caribbean Culture, Fashion and Development in the Caribbean, and Identity and Conduct in Jamaican Dancehall.

## External Review Process

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Dr. Stanley Niaah was asked to review the cultural relevancy of the 7 books, paying close attention to several factors:

1. Proper use of Jamaican English (i.e., using language and grammar that are familiar and customary in Jamaica),
2. Cultural relevance of story lines (e.g., appropriateness of games, events, names, festivals, etc.),
3. Images (i.e., do the images seem identifiable to Jamaican parents and children?),
4. Pertinence of the story (i.e., do the elements of the story fit together),

She was asked to comment on aspects of the books that need modifications to support their relevancy. If anything needed modifications, she was asked to provide suggestions for modifications with examples.

## Feedback from the External Reviewer

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In response to the four factors described above, Dr. Niaa first provided her overall impression across all seven books. These comments are presented verbatim in italicized text.

1. Proper use of Jamaican English: *The texts are written in English and there is consistency of its usage. Parents / teachers and children will be able to relate to the written language. Jamaican English is distinct from Jamaican (native language), which is not used in any of the texts. They are also devoid of colloquialisms based on my assessment.*
2. Cultural relevance of story lines: *The texts are culturally relevant and parents / teachers and children will be able to relate to the contexts, circumstances and depictions in the stories, that is, the games played, parties, instruments, games and events. Where events seem outside the realm of the contemporary Jamaican cultural context I have made specific suggestions below. In some cases where the*

*contexts were outside the immediate Jamaican cultural domain there was justification for including details that would serve to expand minds in the context of the larger project of education.*

3. Images: *The imagery / illustrations used in the texts are sufficient and communicate clearly mathematical and cultural imperatives.*
4. Pertinence of the story: *Overall, the stories are pertinent, clearly articulated and well woven. There are a few suggestions below regarding phrasing of math problems, tying elements of certain stories together and representing culturally specific dimensions.*

To provide a context to Dr. Stanley Niaah's feedback, an overview of each book is provided in Table 1, along with the feedback for each book, which is inserted verbatim in italics in the next column. Modifications made to each book area also listed in the table.

Table 1. Overview of each book with text-specific feedback from the external reviewer of cultural relevancy, and modifications made to the book after external review.

<b>Title and Overview of Book</b>	<b>Feedback from Dr. Stanley Niaah</b>	<b>Modifications made to the book</b>
<p><b>Book 1:</b> Where is Maths? Everywhere!</p> <p><b>Synopsis:</b> This non-fiction book is about how math can be used in the real-world.</p>	<p><i>Page 1 (Paragraph 1, line 1) – suggesting that mathematics be spelled out in the first instance of use unless there is a larger imperative to shift the attention and mystery away from the word mathematics to its workings in real life and this will be hampered by repetition of a word that may scare the audience away (literally or figuratively).</i></p> <p><i>Page 2 (paragraph 1, line 2) change to ‘tiled floor’</i></p>	<p>The use of the word “mathematics” was spelled out during the workshop. Maths was used in the book itself to keep the reading level appropriate. The other suggestion was incorporated as is.</p>

Title and Overview of Book	Feedback from Dr. Stanley Niaah	Modifications made to the book
<p><b>Book 2: A Surprise</b>  <b>Synopsis:</b> Kevaughn’s birthday is coming up, and Rasheda wants to help her mom throw a birthday party for him! They invite all of his friends, as well as family and neighbors. Rasheda helps her mother bake a cake, clean and decorate their house, makes a birthday card, and plans the traditional birthday flouring, where she surprises him by dumping flour on him! The party takes a lot of preparation, and Rasheda, along with her mother, has to do lots of measuring to make sure everything is perfect.</p>	<p><i>Page 7 (paragraph 1, line 1) correct name to read ‘Rasheda’</i>  <i>Page 15 – How will the reader indicate who is shortest or tallest? Suggesting that instruction be included in the question such as ‘Circle the shortest person in the photo’ in this context where the shortest person is not a main character in the story and whose name is unknown.</i></p>	<p>All suggestions were incorporated into the text.</p>



Title and Overview of Book	Feedback from Dr. Stanley Niaah	Modifications made to the book
<p><b>Book 3:</b> The Costume Contest  <b>Synopsis:</b> Rasheda, an eight-year-old girl living in Kingston, Jamaica, learns from her teacher that she will have the opportunity to take part in the annual Children’s Jonkunno Competition held by the Jamaica Cultural Development Commission. The story has Rasheda creating her costume as the traditional Jonkunno character of ‘set girl’ and her little brother, Kevaughn, creating his costume as ‘Pitchy Patchy.’ The pair travels to the festival and competes on stage in front of an audience. On the following day, there is a photo of Rasheda and Kevaughn prominently in the Jamaica Observer newspaper!</p>	<p><i>I found elements of this story culturally relevant but in some senses unbelievable. In Jamaica, unlike the Bahamas for example, children grow up being afraid of Jonkonnu so it is a little unbelievable when children are portrayed as excited to play Jonkonnu or be masked for a Jonkonnu parade. There is currently no context in which children participate in Jonkonnu except as spectators who are consistently in fear of Jonkonnu revellers. Similarly, Jamaica does not have Jonkonnu festivals and it is a dying activity which principally emerges around Christmas. As a folk tradition therefore Jonkonnu is hardly seen in Jamaica today and certainly does not exist at the National level in an organised sense. Based on the foregoing, I suggest that the story be reformulated along the following lines: Jonkonnu will be featured in this year’s Jamaica Day celebrations in which many schools across the island will participate. Rasheda and Kevaughn attend Mount Mary Primary (for eg.) and they all want to dress up in the Jonkonnu costumes on Jamaica Day. The details following on will then reflect that 30 students and teachers will represent the school in the National Jamaica Day Parade at the national Stadium and Rasheda and Kevaughn were selected. The elements in between with Rasheda and Kevaughn’s costumes are appropriate with parent input and the elements gathered to construct them.</i></p> <p><i>Because the word ‘rags’ (page 7) is ambiguous the author may wish to use ‘strips of ‘old clothes’ or just ‘old clothes’, at the first reference. Also relevant to a Jamaican context would be to replace ‘scraps’ on page 8 (paragraph 1, line 2) with clothes (would then read ‘old clothes’).</i></p>	<p>The reviewer’s suggestion was taken in to account and the basis of the story was changed entirely. The name of the story was changed to “The Parade” and the story was reformulated to be as recommended. Other suggestions by the reviewer were incorporated into the book.</p>

Title and Overview of Book	Feedback from Dr. Stanley Niah	Modifications made to the book
<p><b>Book 4:</b> The Market</p> <p><b>Synopsis:</b> Rasheda and Kevaughn love to go to the marketplace to shop for fruits, vegetables, and more! They need to shop for food at the market and buy things to make their favorite things at dinner.</p>	<p><i>The word 'candies' (as used on page 12) is not used in Jamaica in the way that it is used to refer to sweet treats in places such as the USA. In Jamaica the word 'sweeties' would be more relatable.</i></p>	<p>Candies were changed to sweeties.</p>

Title and Overview of Book	Feedback from Dr. Stanley Niaah	Modifications made to the book
<p><b>Book 5: Rasheda's Music</b>  <b>Synopsis:</b> Rasheda is told by her teacher that each student will have the chance to make a presentation in front of the class. The assignment is to find shapes in the real world, and then share these findings with the other students. Rasheda knows immediately she will ask her grandpa for help. Her grandfather and her share a passion for music, and she asks him to help her find shapes in his music and instruments! She spends the day with her grandfather and his friends as they play music together as a band. After lots of laughter and learning, Rasheda is able to return to her class and present everything she learned.</p>	<p><i>Page 6 (paragraph 1, line 3) – the banjo is not used in the playing of reggae but rather mento. The same could be said of the Rhumba Box (first mentioned on page 8) which is hardly seen in the playing of Jamaican music today. This is one occasion when I concluded it was more significant in a digital age to keep the memory of such instruments alive than to be culturally specific. My suggestion to reconcile these elements is simply to include both genres of music as those played by the band, that is, Mento and Reggae.</i></p>	<p>The reference to Reggae and Mento were removed so as not to increase the readability of the book, while also taking into consideration the reviewer's feedback. The general term "music" was used throughout the book.</p>

Title and Overview of Book	Feedback from Dr. Stanley Niaah	Modifications made to the book
<p><b>Book 6:</b> Teamwork  <b>Synopsis:</b> Kevaughn, Rasheda's little brother, has just joined a brand new football team and really wants to prove himself to his new teammates. The story then follows Kevaughn as the game begins and he plays his first game with the new team! Ultimately, he aids the team by scoring the final goal of the match and brings home the win for his new friends.</p>	<p><i>On page 2 (paragraph 1, line 1) I suggest modifying the story line a bit to indicate that that Kevaughn is playing for the first time with the team. It would read: "Today is the first time that Kevaughn will be playing a match with the new team."</i></p> <p><i>On page 12, line 2, I suggest the following: 'He is good at passing the ball to his teammates.'</i></p>	<p>Both suggestions were incorporated within the book.</p>

Title and Overview of Book	Feedback from Dr. Stanley Niaah	Modifications made to the book
<p><b>Book 7: The Big Race</b>  <b>Synopsis:</b> Kevaughn and Rasheda participate in a 5K race with their friends. The story follows them through the race to the finish line.</p>	<p><i>There is inconsistency it seems in use of runners or walkers or persons which would better describe those who are participants in the races in a consistent way. Page 8 - change 'people' paragraph 1 line 3 to 'runners', 'racers' or 'persons'. Also suggested change for 'people' to persons on page 9 within the question. The sentences that begin each question on page 9, that is, at G1 and G2, could be made more specific. Here again I suggest use of the words 'runners' or persons' instead of people. Same for questions on page 13 at G1 and G2, and again on page 17 at G1.</i></p>	<p>Words were made consistent to reflect the reviewer's comments.</p>

## Conclusions

The purpose of this report was to describe the review of seven children's books for cultural relevancy. The external review of the Literacy Connection was a process whereby all seven books were reviewed by an expert in Jamaican culture. We described the four initial factors that Dr. Stanley Niaah was asked to consider. Next, we listed her observations about these factors and how they pertained to the stories overall. Lastly, we listed her specific concerns of the individual texts from her review and the modifications made by the researchers based upon her feedback.

The expert's general recommendations to all the stories were addressed first in her overall feedback. These first impressions indicated her general agreement with the proper use of Jamaican English, the cultural relevance of the story lines, the appropriateness of the images or illustrations, and the overall pertinence of the stories.

Dr. Stanley Niaah provided a few specific comments and suggestions relating to word choice (i.e., use "sweeties" instead of "candies"), general clarity of short phrases for consistency or specificity, and differentiation of musical genres, such as Mento and Reggae. In one story, *The Costume Contest*, the reviewer described how the Jonkonnu festival or parade is no longer seen as part of the current Jamaican culture. The researchers decided to rewrite the story incorporating the reviewer's recommendations and suggestions and change the name to "The Parade."

In summary, the data provided in this technical report provides evidence that the stories developed for the Literacy Connection of the Parent Math Training Pilot are culturally relevant.

# References

Jamaican Ministry of Education. (2011). *Putting Mathematics into Family Life*. Kingston, Jamaica.