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The 'Maria' books: the achievements and challenges of introducing dual language, culturally relevant picture books to PNG schools

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ABSTRACT

This article describes the development and uptake of two dual-language, culturally relevant picture books in five primary schools in Papua New Guinea (PNG). The purpose of the books was to disseminate agricultural and livelihood messages both at school and at home. Schools were provided with big-book versions as permanent school resources and asked to send small-book versions home to families to both support children's reading and encourage the uptake of the agricultural messages. Evaluations at two different time points showed that, although many teachers valued and used the books, some schools were reluctant to share the books with families. Teachers appreciated the dual-language text and culturally relevant pictures and stories, and many requested that more of these types of books be made available. For more effective book distribution, mobile phones and church networks should be used to distribute books to families and support obtained from school boards and provincial education departments of PNG.

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Introduction

Children's literature is recognised by researchers and practitioners alike as a powerful educational tool. Broadly defined as written works for the information or entertainment of children and young adults, it includes picture books, stories, poetry and graphic novels. Children's literature exposes children to new vocabularies and language use well beyond everyday conversations (Hayes & Ahrens, 1988). In addition, it affords children opportunities to appreciate their own cultural heritage as well as those of others, and to develop emotional intelligence, creativity, personality and social skills; it also transmits important literature and themes from one generation to the next (Norton & Norton, 2010).

Picture books are a staple of early childhood and primary classrooms as they are an important tool for learning to read. In this paper we refer to picture books in which illustrations and text work together to tell a story (Temple, Freeman, & Moss, 1998). These picture books contain simple sentence structures, authentic dialogue, straightforward plots and inviting illustrations (Senokossoff, 2013). Children's picture books have long

been used in first language acquisition and have more recently been used effectively in teaching English as a second or other language to both adults and children (Chen, 2014). They can motivate reluctant readers to read and to enjoy reading (Sanacore, 2002).

This article describes the development of two dual-language, culturally relevant picture books¹ and the outcomes of their distribution to five schools in Papua New Guinea (PNG). PNG is the most linguistically diverse nation in the world, with more than 860 local languages, accounting for 14% of the world's languages (PNG National Commission for UNESCO, 2008). Tok Pisin, Motu and English are the official languages – however, less than 2% of the population is fully literate in English (Rena, 2011). The two books were intended to act as both windows and mirrors (Bishop, 1990). That is, readers would see themselves reflected in the books (as in a mirror) in addition to seeing new experiences (through a window).

The books were part of a four-year agricultural research for development project² which examined the lives of women subsistence farmers in PNG in order to support their move to sustainable livelihoods through planned and income generating farming. Two of the findings from that baseline study were: (1) many women farmers aspired to read and write, and (2) an even larger number wanted to support their children's learning. The findings provided the impetus for the development of the 'Maria' books by the authors of this paper, one specialising in early childhood and the other in adult learning. We anticipated that simple dual-language, culturally relevant books would help mothers interact with their children and with the books, which would also help mothers recall and learn better practices in marketing, budgeting and saving, which is an essential part of improved family farming practices.

Before outlining the project results, it is important to first understand PNG, its current state of education and language policy, and the rationale for creating dual-language, culturally relevant picture books to be used by both schools and families at home.

PNG and its education system

PNG is the largest of the Pacific island nations, with an estimated population of 7.3 million, located in Oceania, east of Indonesia and north of Australia. The landscape consists of an extraordinary physical variety of mountainous and coastal lowlands spreading across more than 600 islands. The population is widely dispersed, with approximately 87% living in villages or rural communities (Department of National Planning and Monitoring, 2010). The majority of these people are subsistence farmers without access to basic services, including health, education, clean drinking water and adequate sanitation. Only 18% of the population has access to electricity (World Bank, 2012).

Education in PNG today is characterised by poor school attendance and retention, low levels of educational attainment and literacy, and high levels of gender inequality (Ryan, Koczberski, Curry, & Germis, 2017). The enrolment rate for primary school is only 50.9%, the lowest in the Pacific region, while the net enrolment rate for secondary school is 28.1% (UNDP, 2014). The education system in PNG comprises elementary school (prep to year 2), primary school (years 3–8) and secondary school (years 9–12). Schooling is primarily based on Western systems of formalised education, which have not been adequately critiqued for their cultural bias and problematic assumptions about teaching styles (Guthrie, 2014). Since missionaries began teaching in PNG 140 years ago, and during its colonial

history,³ indigenous knowledges, values and languages were largely ignored (Bartell, 2015). The PNG Government has now enacted curriculum reforms that encourage the use of indigenous knowledge and language systems for teaching school subjects.

The official language policy in primary education is a bilingual approach (Department of Education [DOE], 2004). Teachers can use any of the country's languages and local customs to make education more relevant to students (Matang & Owens, 2014) and bridge instruction in English. Regular use of both English and the vernacular (mother tongue) must be used for instruction with bridging to English. Students in elementary school use vernacular, and in years 3–5 they bridge to English. The suggested percentage of teaching, learning and assessment in lower primary is 60% vernacular and 40% English in year 3, 50% vernacular and 50% English in year 4, and 30% vernacular and 70% English in year 5. English is the language of instruction in the upper primary years, but teachers 'should make use of their vernacular language as a tool for learning and understanding about and through English' (DOE, 2003, p. 7).

The importance of dual-language, culturally relevant books

Dual-language books are written in two languages and are intended to be read in both languages simultaneously, which helps readers become literate in a second or third language (Kenner, Gregory, Ruby, & Al-Azami, 2008) by allowing them to use higher order vocabulary skills from their first language (Naqvi, McKeough, Thorne, & Pfitscher, 2013). Readers can extend their first language literacy and link it to their second language literacy (Taylor, Bernhard, Garg, & Cummins, 2008), and transfer conceptual knowledge and skills across languages (Kenner et al., 2008). Translation, paraphrasing and code mixing (using units from two languages intersententially and intrasententially) facilitate English language learning (Shah-Wundenberg, Wyse, & Chaplain, 2012). Finally, dual-language books can form a bridge between home and school, where both the home language and official language are valued (Sneddon, 2008).

While we would have liked to include a vernacular language as one of the two languages in the books, we could not prioritise one of PNG's 800-plus languages over the others. The two languages selected were English, as it is the language of instruction in school from year 5, and Tok Pisin, as it is the most widely spoken language across the country.

We strongly believed that the most effective books for early readers would be those that drew on the context and culture of the readers – namely, books that readers could 'connect with' (Freeman, Freeman, & Freeman, 2003; Gangi, 2008) and help readers to 'draw on their background knowledge and experiences to make meaning' (Ebe, 2010, p. 194). There is a large body of literature supporting culturally relevant teaching and materials. Culturally relevant literature uses students' cultural knowledge and ways of being in the world to support learning (Sharma & Christ, 2017). Gay (2002) argues that 'when academic knowledge and skills are situated within the lived experiences and frames of reference of students, they are more personally meaningful, have higher interest appeal, and are learned more easily and thoroughly' (p. 106). Texts with content based on the reader's own culture are easier to read and understand than those from other cultures (Carrell & Eisterhold, 1983) and promote reading achievement (Zygmunt, Clark, Tancock, Mucherah, & Clausen, 2015). Culturally relevant reading materials underpin initiatives

like the African Storybook, an open access website with contextually appropriate books for early readers in African languages (see www.africanstorybook.org).

According to schema theory, text in itself does not hold meaning. Instead, the text gives directions for readers to retrieve or construct meaning from their own previously acquired knowledge or background knowledge (Carrell & Eisterhold, 1983). Text comprehension is an interactive process between the text and the reader's background knowledge, given that 'every act of comprehension involves one's knowledge of the world as well' (Anderson, Reynolds, Schallert, & Goetz, 1977, p. 369) and that 'new information, new concepts, new ideas can have meaning only when they can be related to something the individual already knows' (Kant, 1781/1963 cited in Carrell & Eisterhold, 1983, p. 553).

Stories are accessible only when the reader holds the vocabulary and background knowledge needed to comprehend them (Rosado, Amaro-Jiménez, & Kieffer, 2015). These authors argue a successful way of developing vocabulary and schema is to use stories that resemble authentic and culturally relevant situations, such as everyday practices at home and family related storylines. Our books depicted everyday living, including subsistence farming and marketing, enabling children and families to draw upon their own background knowledge and vocabulary to access the stories and messages within the books.

As stated in the introduction, the books were intended as both windows and mirrors (Bishop, 1990). In PNG there is a paucity of children's picture books, and even fewer books that include Papua New Guineans as central characters. This is troubling given that:

When children cannot find themselves reflected in the books they read, or when the images they see are distorted, negative, or laughable, they learn a powerful lesson about how they are devalued in the society of which they are a part. (Bishop, p. ix)

Children need books that validate their experiences and identities, and that expose them to new or different realities.

The importance of reading at school and at home

The Maria books were intended to be used by both schools and families at home. There were enough books for each school to have big-book copies and for each family to have small-book copies. Research in family shared book reading has consistently demonstrated positive outcomes for children's acquisition of early language and literacy skills (Roberts, 2008; Wasik, Bond, & Hindman, 2006). Storybook reading is a frequently recommended practice for building preschool children's language and literacy skills (Roberts, 2008). Not only do books introduce new vocabularies; they can also stimulate conversations and extend interactions. North American research indicates that less-educated, lower income parents talk less to their children and use fewer differentiated words than their higher-educated and higher income counterparts (Hart & Risley, 1995; Hoff-Ginsberg, 1991). It seems reasonable to assume that these findings are relevant to PNG parents, where adults over 25 attended school for an average of only 3.9 years (UNDP, 2014) and only 62.4% of adults are literate (Ryan et al., 2017).

Intergenerational illiteracy is evident in PNG – the Maria books were intended to disrupt this. In some PNG high-poverty settings there may be three or more generations of families with low literacy resulting in a lack of strong language examples, limited child–

parent interaction and a lack of quality print materials (Cooter, 2006, p. 698). However, within any household there are ‘funds of knowledge’ that arise from the lived experience of adults and children. Importantly these funds of knowledge are grounded in the specific cultural context of a family (Esteban-Guitart & Moll, 2014). Parents can be shown how to use the skills they do possess and their funds of knowledge to become successful ‘home literacy teachers’. Cooter (2006) argues that mothers can engage in dialogic reading, where the child talks about a picture and the mother asks ‘what’ questions and rephrases and extends upon what has been said.

Development of the Maria books

Using the principles of stories as mirrors and windows, and culturally relevant texts, we designed two picture books with agricultural messages. The concept of a ‘family team’, in which farm and family work and decisions are shared between men and women, was a core feature of our wider project. The family team in the series is a mother, father, grandmother, two primary school-aged children and a baby. Maria, the young girl, was chosen as the central character to present an active role for girls. By using the same family, we developed narrow reading texts – the books reflected only one genre, one subject matter, and the work of same authors, which can help second language learners (Hansen & Collins, 2015). Narrow reading assists beginning readers by providing a familiar context – that is, they do not need to learn new characters and settings, making reading more comprehensible (Cho, Ahn, & Krashen, 2005). Narrow reading also allows for repeated exposure to the same vocabulary, easing the lexical burden on readers (Hwang & Nation, 1989). Our books would allow readers to become familiar with the family characters in addition to giving them repeated exposure to the concepts and vocabulary related to earning money, saving money and budgeting.

The key messages of the books were data driven. The baseline study had found that major barriers for women included gender inequality in farm and family labour, lack of post-harvest and market skills and low financial literacy. Hence, the two Maria books were *Maria’s family goes to market* (containing messages about sharing farm roles, planned harvesting, planned marketing, produce preparation, cleanliness of seller and produce, pricing, saving from profit) and *Maria’s family saves their kina* (containing messages about equitable family income generation, shared budget planning to ensure money for daily living, church, school and medical costs, agriculture costs, extended family needs, and family saving). Figure 1 shows pages from *Maria’s family goes to market* and Figure 2 shows pages from *Maria’s family saves their kina*. English was positioned as the first language as it is the language of instruction in primary schools. Colours were used to highlight the different languages for parents with low literacy.

The research study

The larger research project was conducted in the Baiyer Valley, Western Highlands (WH) and the Gazelle Peninsula, East New Britain (ENB) as these represent two of PNG’s major geographical farming regions (see Figure 3).

In each area, two large communities were the sites for the wider participatory appreciative action research and learning activities (see Pamphilon et al., 2015). All primary

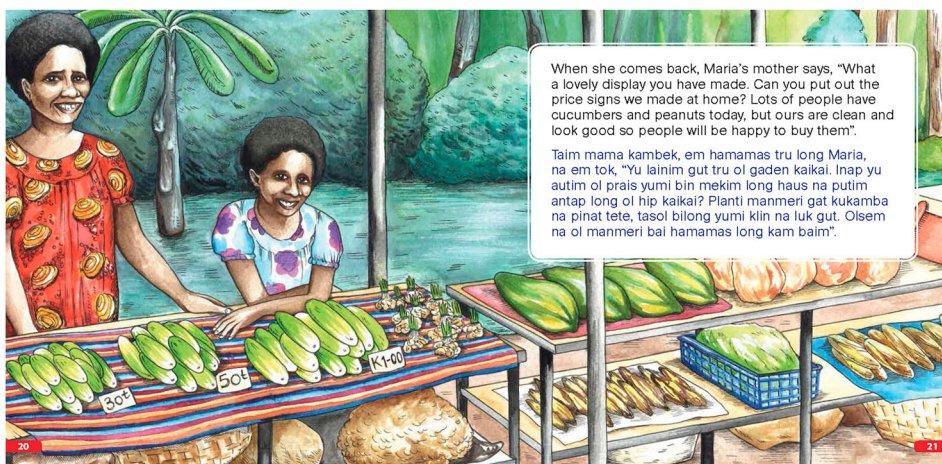


Figure 1. Excerpt from Maria's family goes to market.

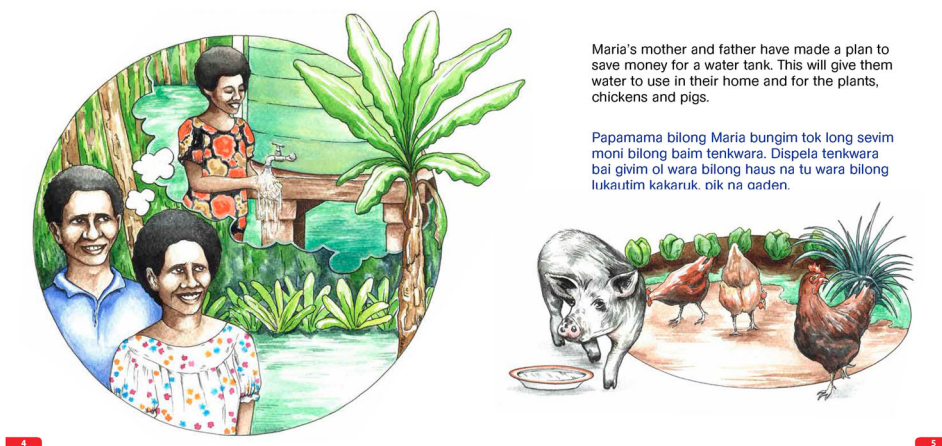


Figure 2. Excerpt from Maria's family saves their kina.

schools in the areas were included in the trial of the use and impact of the Maria books (WH 2, ENB 3). The schools were asked to use the Maria books in the classroom for approximately four weeks and then to send a copy of each book home to every family in the school. In this way, children would know the books' words, drawings and messages, and be well prepared to interact with their parents in the 'reading' of the books.

To ensure consistency of classroom use of the books, a teacher professional development (PD) workshop was delivered. The workshop provided teachers with ideas on how to use the books to teach English through grammar, vocabulary and spelling exercises, in addition to meeting outcomes from the 'Making a Living' curriculum strand (a prescribed upper primary subject). It was emphasised that the books could be used to deliver the curriculum and not as additional thing to teach. Due to teachers' availability, three versions of the PD were required:

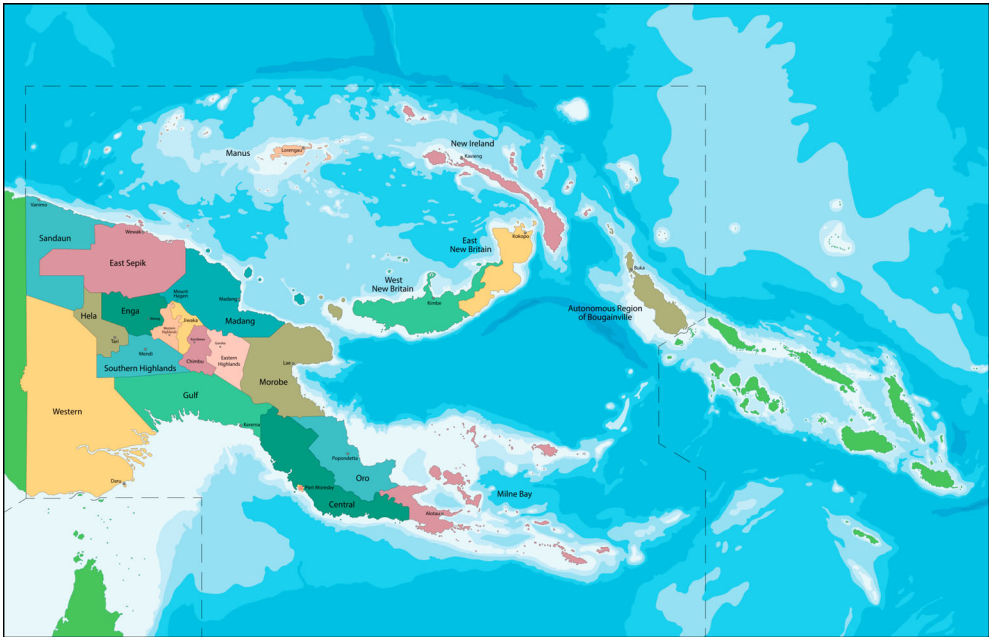


Figure 3. Map of Papua New Guinea.

- WH: a two-hour workshop with eight teachers and the principal facilitated by the first two authors.
- WH: a one-hour workshop with one teacher and the district education director facilitated by the first author. Despite the workshop being held in the first week of school, all other teachers had not returned to duty. The teacher and director agreed to share the training with other teachers.
- ENB: colleagues from the local teacher's college, trained by the first author, integrated the Maria books PD into their two-day workshop on creating literacy resources. A total of nine teachers from the three schools attended the workshop. Normal practice within these schools is that a small number of teachers attend PD and then present the new information and learning to other teachers during staff meetings.

The research team returned to both areas six and eighteen months later to collect evaluation data. Parent/community members, teachers and children's perspectives of the books were all sought, however, this article only focuses on teacher reports (see Simoncini, Pamphilon, and Mikhailovich (2017) for community perceptions). We initially planned for all teachers to complete the written survey in the first visit and to follow up with focus groups in the second visit. Written surveys were selected over interviews to reduce individual and cultural courtesy bias. The written survey contained six questions: How often did you use the books?, How did you use the books?, What impact have the books had on the children's literacy and numeracy learning in class?, Will you continue to use the books?, Why/why not, Other comments you would like to make about the books? Despite considerable prior arrangements, participant numbers were low (Figure 4).

| School | Region | 6 months | 18 months |
|--------|--------|---|---|
| 1 | ENB | Survey: 15 teachers (13 F, 2 M) | Interviews: 5 teachers (3 F, 2 M) 1 principal (M) |
| 2 | ENB | Interviews: 6 teachers (3 F, 3 M) 1 principal (M) | Interviews: 4 teachers (3F, 1 M) 1 principal (M) |
| 3 | ENB | Interviews: 1 teacher (F) | Interviews: 1 principal (M) |
| 4 | WH | Interviews: 2 teachers (F) | Interviews: 1 teacher (F) |
| 5 | WH | Survey: 7 teachers (2 F, 2 M, 3 unknown) | Interviews: 1 teacher (F) |

Figure 4. Participant numbers by data type and school.

The 6-month interviews were conducted by the first author (Australian), and the 18-month interviews by the third author (Papua New Guinean). Interview questions comprised of what they thought of the books, how they were or would use the books.

A thematic analysis was used to identify key themes. Processes were multi-iterative and non-linear, involving Creswell's (2009) strategies of organising data, reading through data, beginning coding, generating categories and/or themes based on coding, deciding how themes will be presented, and interpreting the data.

Assessing the impact and uptake of the Maria books

Whilst there were a number of important successes and lessons learned about the impact of the books and their future development, there were also many challenges in the book distribution and uptake in schools.

Successes and lessons learned for future book development

All teachers valued the Maria books as place-based books that related to village life. They frequently mentioned how students' lives in the villages were reflected in the books, illustrating the books 'mirrors' effectiveness.

The story in the books really suit the traditional life of individual families. (Female, year 3, school 1)

The books are attractive for the little children. The pictures are real-life pictures, they suit their communities based on subsistence farming. (Female, year 4, school 2)

The book is quite a useful resource in and outside of the classroom ... teaching the students about the real-life situation faced in the communities. (Male, year 3, school 1)

The teachers thought the books taught important skills necessary for village life. These were the 'windows' where children were exposed to new ideas including planning, budgeting and saving. Even teachers who had only seen the books for the first time could see how the books could assist children's learning and futures.

It will help the children at home. It will help them be good subsistence farmers. It will help them know how to budget their income. It will help them save. (Male, year 6, school 2)

It suits the PNG lifestyle. We should use the books. It is life skills. Some will go to uni but those that go home need these skills. It will prevent raskolisation.⁴ (Male, year 7, school 2)

In School 1 (ENB) all 15 teachers had regularly used the books from the time they obtained them and said they would continue to use the books as teaching resources.

For sure I will continue to use the books in future as they are so vital and resourceful especially in areas like where we are. Students when equipped with the knowledge extend it practically in their respective homes. (Female, year 8, school 1)

I will continue to use the book because it is another way of enriching students' learning in the classroom, and when they go back home they will implement what they have learned in the classroom. (Female, year 7, school 1)

Teachers reported using the books for both teaching reading and integrating it with other subjects like 'Making a living' and Mathematics. Approximately half of the teachers surveyed said they used the books for reading practice (individual reading, paired reading, group reading and whole class reading). Several teachers considered the books as an important resource for teaching literacy skills. Other teachers used the books more broadly, for instance, *I used the books for reading for meaning, detail, comprehension, making a living lessons, budgeting, living a sustainable life, drawing, description and procedure* (Female, Year 6, school 1).

The teachers particularly liked that the books were written in both English and Tok Pisin. Several teachers commented that it was the first time they had come across dual-language books.

The books are nice because they are in English and Tok Pisin. The children could read and translate them. (Female, year 5, school 2)

Children read in English and then read in Pidgin. That tells them or helps them understand clearly what they were reading. (Male, year 4, school 5)

Good bridging and translation. It suits the vernacular and understanding. They understand Pidgin better but the English is simplified so kids can understand. (Female, year 4, school 2)

Not surprisingly, the teachers wanted more books like the Maria books. That is, they wanted additional dual-language books that related to the lives of children in subsistence farming communities. In other words, they wanted books that were both 'mirrors' and 'windows'.

I for one would like to suggest if we can have more reading books for the children to read which are really based on the real-life situations or agriculture. (Female, year 3, school 1)

We need some more books of these kind but of different topics, e.g. on seasonal food, crops, nutrition, personal health so on. (Unknown gender, year 3, school 5)

Nine of the 22 teachers surveyed explicitly asked for more books. These teachers even made suggestions for topics of future books, including raising pigs, raising chickens, running a trade store or bus service and caring for the environment.

Finally, several teachers reported changes in children's and their families' practices and attributed them to the books.

The greatest impact is that the children did a lot of changes in terms of doing little banking back at home using piggy banks. (Male, year 3, school 1)

Some of the children have changed. They sell few garden crops and bring back the money home to the family. Every family member needs to work and cooperate together in family work/tasks. (Female, year 3, school 1)

In the village communities, young girls are starting to help out with marketing at the market during Saturdays when they are in need of money for a class party or to buy something. (Female, year 4, school 1)

These reports were validated by parent and community reports (see Simoncini et al., 2017). However, as will be discussed in the following section, there were a number of challenges and salutary lessons.

Challenges in the book distribution and uptake in schools

Despite the intention that the books be sent home to families in the villages, four of the five schools had retained the books at the six-month mark. In ENB, school 1 had used the books in class frequently, and teachers and children had created their own class big-book versions. In schools 2 and 3 the books were still in boxes. During our visit to school 2, teachers were told to read the books with the children. In school 3 none of the teachers knew about the books except for those four teachers who attended the training. In WH, school 4 had given the big-book versions to the lower primary teachers and to the nearby elementary school. The small versions were still in the boxes. School 5 had used the books across all year levels and three weeks before the evaluation had given them to the children to take home to their families. The principal of this school had wanted to keep the books; however, one of the teachers who was also a village community educator in the project argued that the books were funded on the basis that they would be sent home to the parents.

When teachers and principals were asked why the books had not been distributed, the most frequent reason given was that the books would get dirty or lost. Both groups believed that the books would not be cared for in the home. While never explicitly stated, it was apparent that staff believed the books were better suited for schools than homes. When we explained that we were obligated to distribute the books to families as part of our funding requirements, arrangements were made with the principals in schools 1 to 4 to send the books home to families.

One year later, the third author returned to the five schools. Schools 1 and 2 in ENB had distributed the books to families. The books remained in the boxes in school 3 (ENB) and school 4 (WH). When asked why the books had not been distributed to families, the principal of school 3 explained that any new resource must be reported to the provincial education department, which would then grant permission to use the books. However, he had not begun this process. In this school, the teachers who attended the training had delivered professional development to the other teachers in the school; however, they had no power to open the boxes and distribute the books. The principal of school 4 explained that he was waiting for training before distributing the books within the school. This principal had in fact been present, with eight other teachers, for the two-hour professional development session. The year 3 teachers had used the books since the beginning, as the

principal's wife was one of the year 3 teachers. The other teachers who were present at the initial training had seen the books but were unable to use them as the principal had not distributed them.

Where teachers did have access to the books, a small number perceived them as additional to the curriculum. They saw the books and the related teaching activities as extras in an already crowded curriculum. While these teachers liked the books, they were not able to see how the books could be integrated into the curriculum or support student learning. Most likely these teachers had not participated in the PD workshops that showed teachers how the books could be used to deliver the curriculum.

Discussion

The two main findings in the study were (1) the resistance of schools to distribute the books to families and, to a lesser degree, use the books and (2) the success of the books as dual-language, culturally relevant texts that acted as mirrors and to a lesser degree, windows. The first finding was completely unanticipated. Initially, only one school had distributed the books to families, and this was due to the insistence of one teacher, who was part of the larger agricultural project. After it was made clear to schools that the books were to be given to families as part of the funding requirements, a further two schools sent the books home to the families. Two schools, however, still had not distributed the books one year later. Although this was regrettable and limited the final evaluation, the team recognised the authority of the principal to make this decision for his school.

While unexpected, the reluctance of schools to issue the books to families is easily explained. Educational resources and children's books are both scarce and precious in PNG. When resources become available, schools naturally want to keep them for their own use. Staff may legitimately believe that this could be the only occasion they will be given books in the foreseeable future. Their concerns about the books getting dirty, destroyed or lost demonstrates their belief that schools are expected to protect and maintain valuable resources. Further the research team's interest in supporting family learning in the home for the benefit of both the children and their parents was perhaps a foreign concept for teachers who have minimal training (typically two years) and very limited/no professional development (Rena, 2011).

What is not so easily explained is why the two principals at schools 3 and 4 refused to use the books within their own school. The school 3 principal related the need for approval from the education department to use new resources; however, neither of the other nearby schools in ENB mentioned this requirement. Indeed, at the launch of the books at the National Agricultural Research Institute by the Deputy Prime Minister, the Honourable Leo Dion, presentations of the books were made to the provincial department of education. The research process may have further exacerbated this issue as our local partners who contacted the schools and gained permission to trial the books were a major church community worker (WH) and an agricultural research agency (ENB), who may not have had professional resonance with the principal. Further,

One further explanation for these principals not using the books could be that the books were regarded as being so valuable that they were being 'saved', in the way that special glassware and crockery is saved for special occasions. While the books remained

in boxes, there was no chance they could be damaged or destroyed or go missing. Anecdotally, when the authors related this experience to other PNG professionals in both health and education sectors, nearly everyone shared a similar experience – that is, they had comparable stories of people holding resources rather than using them.

This research has highlighted the need for diverse avenues of access and distribution of books. Connections with organisations such as Library for All⁵ could make it easier for communities to access these books. Library for All operates an online curated digital library of culturally relevant books. They work with telecommunication operators to allow free downloads of books for children from mobile phones. While most people in PNG live without electricity, running water or sanitation 46% of the population has a mobile phone (International Telecommunication Union, 2016) and lowering costs of phones and data are making them more affordable than ever. Mobile phones are successfully being used to enhance health service in Papua New Guinea (Seymour, 2017). Using mobile phones as a platform for digital books would overcome the prohibitive costs of printing and freight to most parts of PNG. Future literacy resources targeted at families could be dispensed through the churches, which are mainstays of the community in PNG, where 96% of the population identify as Christian (Hauck, 2010). Churches provide significant education and health services for rural areas. They host relevant groups such as literacy classes, women's fellowships and Sunday schools. Resources aimed at schools could be distributed through school boards, as both state- and church-run schools in PNG are governed by school boards. Their approval of the materials would mandate accountability for the distribution and prevent principals monopolising the resources or prioritising other activities over the dissemination and supervision of the use of such resources.

Dual-language, culturally relevant books in PNG

Our findings were consistent with the research body on culturally relevant literature. That is culturally relevant books are easier to read and understand (Carrell & Eisterhold, 1983) and increase students' engagement in reading (Feger, 2006; Gay, 2002). Teachers reported that children liked the Maria books and readily engaged in reading them. That the books were so popular is not surprising given the paucity of books that depict PNG characters or settings. For many children, this would have been the first time they saw people like themselves in a book. These books validated their culture, their way of life and their identity. The new information about ways to plan, budget, save and market were 'windows' enough. Previously, they had read only donated, out-of-date books from Australia that show white people engaging in Western activities, such as going to the circus or catching the train – it is little wonder that teachers and children appreciated seeing in the Maria books a mirror of their own lives rather than a window into the lives of others. As Auerbach (1989, p. 166) reminded us:

Literacy is meaningful to students to the extent that it relates to daily realities and helps them to act on them ... The teachers' role is to connect what happens inside the classroom to what happens outside so that literacy can become a meaningful tool for addressing the issues in students' lives.

Further evidence that the books were successful was the request from many teachers for more of these types of books. Teachers did not ask for more books in general; rather, they

asked for more of this type of book – that is, culturally relevant books that depicted PNG people in everyday situations. Our finding supports Forman's (2014) assertion that while local teachers may recognise the cultural distance of a text, they often feel they lack the legitimacy to question such texts from outside cultures (p 85).

The findings substantiated the use of dual-language books in PNG. The teachers perceived that the books helped children become more literate in both English and Tok Pisin. This finding aligns with other research that posits dual-language books assist readers in becoming literate in second and third languages and use skills and knowledge from their first language (Kenner et al., 2008; Naqvi et al., 2013; Taylor et al., 2008). As they live in the most linguistically diverse nation in the world, all children in PNG speak their local language and learn English. Dual-language books can greatly assist their learning across the different languages. Dual-language books support bilingual education, which is mandated by the PNG education department (DOE, 2004). The books can also support children in learning the formal language of school or written texts. Children come to school with oral language or the language of utterances and must learn the language of written texts and the language of school (McLaughlin, 2013). Children in PNG largely have not been read to before they come to school and therefore must learn that written and oral language are not the same. Dual-language books can enable children to learn the language of school in their first language.

While the teachers did not explicitly state that the dual-language books equally valued both languages, they considered the books did connect home and school. This aligns with Sneddon's argument that dual-language books can form a bridge between home and school where both the home language and official language are valued (Sneddon, 2008).

Given the success of the books as dual-language, culturally relevant texts, more books like this are needed. That is, more books that incorporate local languages alongside English, as well as depicting PNG people engaging in culturally relevant activities should be created. Children's picture books derived from a research projects are a novel way of producing books and a clear departure from writing competitions and writer's workshops that are often used to build writing capacity and increase book production (Edwards & Ngwaru, 2012). Multiple approaches are necessary to create large numbers of books that are both windows and mirrors.

The obvious limitation to this study was the small number of schools involved. The participating schools were chosen because the major research project was located in their area. However, if funding for wider dissemination is successful, it will be possible to design an ongoing engagement with schools, principals and teachers in the use of the Maria books in schools and with school families. Future projects should ensure that all teachers receive PD on ways to use the books and how to deliver the curriculum using the books. The importance of family and home learning should also be emphasised.

While we cannot generalise from our findings about the distribution of the books, there is sufficient evidence to support the use of dual-language, culturally relevant books in PNG. Research involving digital books would allow for data collection on book and language preferences, in addition to time spent reading and completion rates. The country is a rich research site for further studies examining language acquisition.

Conclusion

The two dual-language, culturally relevant books developed in the project resonated with children and teachers. The books acted as both mirrors and windows and assisted children's literacy learning in two languages. These types of books provide a tool for overcoming a number of challenges faced in education in PNG, including the bridging to English instruction in primary schooling, the variety and number of languages across PNG, and helping children learn the language of school and written texts. The findings align with international literature on dual-language books and culturally relevant material and support their use. The challenge now is to share this knowledge with education department personnel, teachers and principals in PNG to generate more of these types of books and ensure the distribution and deployment of such books.

Notes

1. The 'Maria' books can be found at <http://pngwomen.estem-uc.edu.au/marias-family-books/>.
2. This project was funded by the Australian Centre for international Agricultural Research <http://aci.gov.au/project/asem/2014/095>.
3. PNG was granted independence from Australia in 1974.
4. Raskols is the Tok Pisin word for gang members or street criminals.
5. <http://www.libraryforall.org/our-story/>.

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