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Phonological Awareness Development for Samoan Children

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Abstract
Phonological awareness (PA) is critical for early literacy development in English and other languages (Gillon & McNeill, 2007; McNaughton, 2020; Aukuso, 2005), yet little is known about PA in Samoan. This doctoral study addressed that gap with 100 students and five principal participants, motivated by national concerns over low literacy outcomes among Samoan children (SPC, 2021; SEGRA, 2017). Using a mixed-methods approach, the study developed the Samoan Emergent Phonological Awareness tool (SEPA), which included an oral comprehension subtest, and combined indigenous and universal methods. Findings confirm that PA supports Samoan literacy development and that integrating phonemic awareness with phonics enhances reading and comprehension more effectively than teaching each skill in isolation (Aukuso, 2021; Gillon, 2017).

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Introduction

Phonological awareness - the ability to manipulate the sound structure of spoken language - is a foundational skill for literacy development across many languages, for both monolingual and bilingual children (Gillon, 2017) [18]. Relatively little is known, however, about the phonological awareness of bilingual Samoan/English children in the Samoan language and how this may influence their reading and writing development.

Reports indicate that Samoan students' literacy skills in the Samoan language are problematic (Samoan Ministry of Education, Sports and Culture, 2017; World Bank, 2017). The World Bank (2017) reported that after three years of schooling, Samoan students were unable to read Samoan with fluency and accuracy, thereby affecting their reading comprehension. Furthermore, according to the Samoan Ministry of Education, Sports and Culture (2017), the basic skills required for students to read and comprehend text were not being developed; consequently, students were not learning to read or reading for understanding at school.

The overall results of the above research identified a lack of decoding skills among students. For example, 15% of all students could not correctly identify a single letter sound, including 20% of Year 1 students and 12% of Year 2 and Year 3 students. Similar results were observed for reading comprehension, with only 6% of students scoring 80% or above—the international pass benchmark.

Of note is that the assessment was prepared in Samoan and, more importantly, provided the first measurable indicators of Samoa's early literacy performance. The media (Personal Communication, Source 1), along with parents and educators, have raised concerns about the poor literacy performance of Samoan students.

Equally concerning are issues of assessment validity and reliability, raised by several sources (Personal Communication, Source 2). This government report confirms international and local findings that, on average, the overall literacy of second-language learners (for whom English is the second language) remains low by world standards (Toloa-Amituana'i, 2005; UNESCO Report, 2020–2025).

Literature Review

Historical and Contemporary Context

Since the 1830s, when missionaries established Western-based education in the Samoan islands, phonics has been the predominant method of teaching sounds. Its primary focus was to assist beginning readers in improving their ability to identify letter–sound correspondences and spelling patterns to advance reading skills (Bowers, 2020) [7]. This approach was problematic, however. Although a form of phonological awareness was involved in children's learning- even unconsciously (Ehri, 2014) [12] - no formal assessments were available to measure this phenomenon.

For Samoa, the initiative for a programme originated from a global strategy called EGRA (Early Grade Reading Assessment), which was adapted and introduced into Samoan schools in 2017 under the name SEGRA (Samoan Early Grade Reading Assessment). Prior to that, several New Zealand–based researchers (Ballard & Farao, 2008; Hamilton & Gillon, 2006; Tavita & Aukuso, 2019; Westerveld, 2014) [6, 21, 35, 40] studied the Samoan and English phonological awareness development of Samoan children in New Zealand. Such research has since become the focus of current interest and activity among Samoan schools and the Samoan education system (Personal communications, Sources 1, 2, and 3).

As the Samoan language has become transnational, the demand for its use has shifted - for example, in the development of bilingual education goals that promote the merits of additive bilingualism in Samoa (Aukuso, 2002; Tuafuti, 2016) [2, 36]. Over time, it has become evident that linguistic skills are transferable from one language to another (Cummins, 1980, 1981; Tuafuti, 2016) [10, 36].

Of particular interest is the consensus that phonics methods and phonological awareness abilities complement each other (Ehri, 2014) [12]. While phonics provides young learners with mapping skills in letter–sound relationships, phonological and phonemic awareness offers a stronger foundation for experiencing sounds holistically (Bowers, 2020) [7]. Creating an awareness of sounds in words is the foundation for good spelling and reading (Gillon & McNeill, 2007) [19]. Children who master such skills in their first language have proven successful in acquiring phonological awareness in a second language as well (Gillon & McNeill, 2007) [19].

A vital feature concerning the Samoan language has been the shift in the pronunciation of the Samoan vowel sound, which appears more prominent in New Zealand and the diasporic community than in the mother country (Tavita & Aukuso, 2019) [35]. Tavita and Aukuso's article, "The Samoan Vowel Shift: A Phenomenon in Phonetics and Phonological Awareness" (2019), attributed the lack of awareness of Samoan sounds in New Zealand to several factors, including the impact of teaching practices on the instruction and learning of correct sounds for a minority language in an English-speaking environment (Taumoefolau *et al*., 2002; Tavita & Aukuso, 2019) [34, 35]. To date, relatively little knowledge has been shared on how these changes affect language development for the Samoan leo (language).

Almost 50 years on, a World Bank (2017) initiative released its findings on the state of early education in Samoa. Under its programme PEARL (Pacific Early Age Readiness and Learning), an evaluation of children aged three to five was conducted. Using the SEHCI (Samoa's version of the Human Capability Index), children were assessed in terms of their physical, verbal, cultural/spiritual, social/emotional perseverance, approaches to learning, numeracy/concepts, and literacy (reading and writing) abilities. The report confirmed that preschool attendance was not significant in determining a child's learning success at school. This was further acknowledged in the latest report, "Samoa's Second Voluntary National Review" (World Bank, 2017), which highlighted pressing issues such as low school enrolment due to low prioritisation by parents, limited access, and costs. Samoa is rated as one of the lower-ranked countries in literacy performance in the region (World Bank, 2017).

The current state of poor literacy development for children in Samoa was the driving force for my research, reported in this paper. The main purpose of the study was to address the poor literacy performance of bilingual Samoan/English learners living in Samoa and to provide guidelines for enhancing their reading skills for educational success. Two goals were established: (1) to ascertain the phonological awareness skills of the Samoan language for bilingual Samoan children aged five to seven years, in an attempt to highlight its importance in language development, including learning to read; and (2) to identify the enablers of success for children's classroom curriculum learning performance.

Methodology

I used a mixed-method (qualitative and quantitative) approach in this research, which involved developing a phonological awareness tool to assess bilingual Samoan/English children living in Samoa, as well as designing questions for semi-structured principal interviews. While I acknowledge the benefits of both methodologies, I consider the qualitative approach more meaningful and aligned with my ethical responsibilities to Samoan culture. The research activities depend on teu le va (nurturing relationships) and the richness of data that comes from observing and interacting with participants to understand what matters to them. Please see Aukuso (2021) for a full account of the methodology used in this research.

Participants

The Samoan Ministry of Education approved this study and recommended five school principals to approach for school inclusion. I visited each principal to discuss the research and seek approval to approach children's parents for their involvement.

There were two participant groups: (1) one hundred Year 2 students (aged 5 to 7 years) from four Samoan primary schools (three state schools and one private school), who were approved by their parents to participate; and (2) five school principals (two from private schools and three from state schools), who agreed to be interviewed and to have their schools included.

Data collection

1. Phonological Awareness Assessment

Virtually no published research has been conducted in Samoa on oracy development, particularly in the context of phonological awareness, and therefore no assessment existed. This motivated me to prepare a new tool for this study, called the Samoan Emergent Phonological Awareness (SEPA) tool. It involved five Samoan language-specific subtests (letter–sound identification, phoneme identification, syllable segmentation, phoneme segmentation, and phoneme blending) to focus on different aspects of the phonological awareness construct. After construction, the SEPA tool was sent to three Samoan academics for review, which led to

several modifications.

The SEPA tool was administered to the children individually over a three-week period. The data from the SEPA results were analysed according to subtest totals and item complexity to describe the children's performance across different aspects of phonological awareness development.

2. Principal Interviews

Data collection for the second goal involved individual interviews with the school principals. Questions focused on school literacy programmes, including parental involvement and children's backgrounds. These interviews aimed to identify environmental enablers and barriers to children's growth in phonological awareness and other literacy-related skills, such as oral language. The environment was defined as home and school, with attention to the observed "amount" of Samoan and English oral language modelled by surrounding adults. This feature was considered important in children's development (Fletcher, Parkhill, Fa'afoi, Taleni, & O'Regan, 2006; Tuafuti, 2016), as existing practices at home and school could either promote or hinder children's oracy development. These practices can be tapu (traditional sanctions) enforced by the school, family, or community. For example, some parents applied strict time management for children's schoolwork at home, whereas other parents hardly talked to their children except to give commands (Tuafuti, 2016). A culture of silence is thus reinforced - first through the family narrative, and second through school practices and systems (Lee Hang, 2011).

Findings and Discussion

As a bilingual educator, it was reaffirming to find that the results of this study aligned with previous research on the transferability of phonological awareness skills between two languages. Bilingual children with a solid grounding in phonological awareness skills can become competent speakers, readers, and writers in both languages (Aukuso *et al*., 2002; Aukuso, 2005; Collier, 1995; Esera, 2001). My interviews with the principals highlighted several factors influencing parental support for children's language and literacy learning at home. Together with the phonological awareness findings, these results provide crucial information regarding biliteracy teaching and learning for children in Samoa, in comparison with their New Zealand counterparts (Toloa-Amituana'i, 2005).

The Samoan Emergent Phonological Awareness (SEPA) assessment tool, developed and trialled in this research, proved valuable for describing the phonological awareness skills of 100 Samoan children aged 5–7 years living in Samoa. Analysis showed that children's performance was favourable overall, particularly in the earlier developing phonological awareness tasks of Phoneme Identity, Letter–Sound Knowledge, and Syllable Segmentation. These first three subtests were well developed in most 5–7-year-old children. For example, in the Phoneme Identity subtest, all 5-year-olds achieved a 100% pass rate, and for Letter–Sound Knowledge, all 5-year-olds achieved an 80–100% pass rate. This supports the argument that children's early exposure to phonics and a phonological teaching strategy in Samoan schools - specifically for teaching letter names and letter sounds - is invaluable for literacy development. In the Syllable Segmentation subtest, all 5–7-year-old children performed solidly. Out of a total of 12 items, 78 children scored correctly at an 80–100% success rate.

By contrast, none of the children completed the later-developing phonological awareness subtests (phoneme blending and phoneme segmentation), and there was wider variability in individual performance on these tasks. This varied performance prompts questions about possible reasons. First, it may be due to different school and/or classroom practices, depending on the methods used to support children in decoding printed words and spelling correctly. Second, the different techniques used for teaching Samoan sounds may also have influenced the outcomes. Third, the Samoan language is a syllabic language with consonant-vowel segments, very much like te reo Māori. The sounds are auditorily salient within syllabic units, which could explain why the children did not complete phoneme segmentation or phoneme blending. This finding aligns with Harris (2007, 2009).

Regardless of the reason at this point, the data showed that children's early developing phonological awareness skills in the junior school years were strong, but that later developing phoneme awareness skills were much more varied. Consequently, classroom teaching strategies need to be appropriate for the children's learning needs.

It is noteworthy that findings from our SEPA subtests were not consistent with those of the Samoa Early Grade Reading Assessment (SEGRA) (Samoan Ministry of Education, Sports and Culture, 2017). In the Ministry's report (Samoan Ministry of Education, Sports and Culture, 2017), for the Initial Sounds Identification subtest, 42% of Year 1 children could identify a single phoneme, whereas 100% of Year 1 children in my research could do so. Furthermore, 71% of Year 2 children and 79% of Year 3 children completed phoneme identification. In addition, the report stated that 15% of all students could not identify any letter in the Letter–Sound Knowledge test, including 20% of Year 1 and 12% of Year 2 and Year 3 students. There is a similarity in Letter–Sound Knowledge completion with my study, with up to 20% of Year 1 students unable to complete this task. As noted earlier, SEGRA was adapted from EGRA, which influenced its design and administration procedures, leading to the differing findings between the two studies. Differences in teaching pedagogy may also have influenced outcomes.

The findings of this study strongly indicate the need to develop a new phonetic inventory of Samoan sounds to clarify a consistent sound pattern system and eliminate any confusion caused by the influence of English sounds on Samoan. The key word is awareness - instilling a strong sense of the relationship between sound and letter in the early years. A coordinated approach is highly recommended at this stage so that children can be well supported when they begin to learn English as a second language.

Many Pacific children living in New Zealand, including Samoan children, are not keen readers, mainly due to socio-cultural factors (Pouono-Alexander, 2010; Toloa-Amituana'i, 2005). However, research has agreed on the long-term benefits of strong early first-language literacy development for all children. To this end, enablers of strong phonological awareness and oral language development can be identified within the Samoan context to provide essential information for enhancing the literacy development of children in Samoa.

Interviews with the principals highlighted that while all parents value education for their children, barriers to providing home support include: a belief that literacy learning is the teacher's job; limited time due to church,

community, and employment commitments; a belief that English is more important than Samoan; a lack of understanding and knowledge about how to support their children's learning; and their own limited education.

Finally, specific Samoan assessment tools must be developed that reflect children's cultural and linguistic contexts (Siilata, 2014; Tuafuti, 2016). Indigenous languages need to have their own identities within assessment frameworks to facilitate the successful adoption of another language (Baker, 2001; Tui Atua, 2013). The whole purpose behind designing effective assessment tools is to advance children's learning and improve their future performance (see also Galuvao, 2016). The need for culturally and linguistically appropriate assessments - developed by native speakers of the language rather than translations of assessments - to support the teaching and learning of Samoan children is crucial (Aukuso, 2002; Toloa-Amituana'i, 2005; Galuvao, 2016; Tagoilelagi-Leota, 2017; Tuafuti, 2016). The education system needs to provide seminars and resources for parents to encourage and assist them in giving their children home help.

Conclusion

Although little is known from research about children's phonological awareness development in Samoa, the hypothesis has been that such skills are operational. This doctoral study demonstrated that the majority of participants had an overall understanding of Samoan sounds for phoneme identity, syllable segmentation, and letter–sound knowledge, but not for phoneme blending or phoneme segmentation. With these results in mind, it is clear that phonological awareness - particularly for bilingual children living in Samoa - is crucial for learning to read in both languages (Aukuso, 2005; Bruck & Genesee, 1995; Sadeghi & Everatt, 2017).

The study signalled several issues affecting children's learning of phonological awareness skills and reading. For example, variation in classroom and school teaching practices may influence how effectively children learn skills such as phoneme identity, syllable segmentation, and letter–sound knowledge. Further research on teaching practices is warranted to ensure a consistent approach to literacy learning for bilingual Samoan/English children in Samoa. Specifically, future research could examine the integration of phonemic awareness and phonics in teaching practices compared with teaching each skill in isolation (Aukuso, 2021; Gillon, 2017).

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