Te Reo
the Journal of the Linguistic
Society of New Zealand

Volume 68
Issue 3 (*Special Issue*): Vanuatu languages in action
Research Article
2025
Pages 20–60

December, 2025

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Schneider, C., Gooskens, S., Kapelle, O., & Antón-Méndez, I. (2025). English and Bislama in professional contexts: Perspective from an intelligibility study in Vanuatu. *Te Reo 68*(3) Vanuatu languages in action [Special Issue], edited by T. Rangelov, E. Ridge, L. Takau & V. Chen. (pp. 20–60)
This paper is a peer-reviewed contribution from https://www.nzlingsoc.org/journal/

Guest Editors: Tihomir Rangelov, Eleanor Ridge, Lana Takau, Victoria Chen

English and Bislama in professional contexts: Perspective from an intelligibility study in Vanuatu

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Abstract

In many postcolonial societies, the language of the former occupier typically enjoys overt prestige and dominance relative to local languages. Such linguistic power asymmetry may endure long after a country has gained its independence. This is troubling because speakers of dominant varieties enjoy socio-economic advantages over those who do not (Labov, 1966; Bernstein, 1971).

Vanuatu was jointly colonised by England and France until its independence in 1980. Since then, English and French persist as high status postcolonial languages in Vanuatu public institutions, both public and private. This paper examines the suitability of English usage in professional contexts, particularly as compared to Bislama, a widely spoken lingua franca that is native to Vanuatu. A key objective is to test whether well-educated ni-Vanuatu people understand spoken English as well as they understand spoken Bislama. The investigation is supported by opinion and comprehension test results which suggest that Vanuatu citizens have much more exposure to Bislama than to native varieties of English; they prefer Bislama to English, and feel more confident about understanding it; and they do indeed respond more accurately to Bislama test sentences, as compared to English test sentences. The paper discusses the implications of these results for professional contexts such as education, business, and particularly the legal system, where English continues to dominate. The paper concludes

[1] This research has ethics approval from the Human Research Ethics Committee, University of New England [HE22-068] and the Research Ethics Committee of the Faculty of Arts, University of Groningen [68726103].

by suggesting modest but achievable strategies for giving Bislama greater prominence in professional domains.

Summary in Bislama

Long taem we i pas finis long taem blong bubu blong yumi i gat ol waetman we oli wokbaot plante long wol. Oli bin liv long graon blong ol man Vanuatu mo oli bin yusum ol risos blong Vanuatu mo oli enfosem ol loa blong waetman. Mo tu ol waetman oli tekem ol lanwis blong olgeta i kam long Vanuatu. Long 1980 Vanuatu i kasem independens mo ol waetman oli nomo gat tumas pawa. Be tufala lanwis blong waetman tufala i stap yet. Tufala lanwis ia Inglis mo Franis. Tedei yumi faenem se sipos yumi save tok gud Inglis o tok gud Franis hemi save leftemap laef blong yumi. Be sipos man i no save gud Inglis o Franis, hemi moa had blong kasem gudfala edekesen o winim gudfala mane (Labov, 1966; Bernstein, 1971).

Be i gat wan narafala lanwis we ol man Vanuatu oli save gud, lanwis ia hemi Bislama. Klosap evri man long Vanuatu oli save Bislama finis.

Ripot ia hemi askem wan spesifik kwestin long saed blong ol man Vanuatu we oli stadi had mo oli flatem finis wan gudfala edukesen, olsem stadi long yunivesiti. Kwestin ia hemi: wijwan lanwis i gud bitim narawan blong yusum insaed long pablik institusen blong yumi, olsem bisnis mo edekesen mo loa? Wijwan i moa gud, Bislama o Inglis? Blong anserem kwestin ia, mifala i bin mekem wan eksperimen we mifala i bin askem ol man Vanuatu long saed blong tinktink blong olgeta long saed blong Bislama toktok mo kaenkaen Inglis toktok. Mo tu mifala i bin givim wan test blong haremsave wijwan toktok ol man Vanuatu oli haremsave gud bitim narawan. Mifala i bin faenemaot se ol test patispen oli haremsave Bislama bitim olgeta kaenkaen Inglis toktok. Mo tu mifala i bin lanem se ol man Vanuatu oli laekem Bislama bitim ol kaenkaen Inglis, mo konfidens blong ol patispen blong haremsave Bislama i bitim konfidens blong haremsave ol kaenkaen Inglis. Ol risal ia oli mekem mifala i wantem blong talem se Bislama hemi sud wan impoten lanwis blong ol skul mo bisnis mo loa. Mifala i talem se i gat rod blong mekem Bislama i kam wan bigfala lanwis insaed long pablik laef blong yumi, olsem Inglis mo Franis tu. Mifala i prisentem sam tinktink blong mifala long saed blong olsem wanem yumi save leftemap Bislama insaed long pablik laef.

Keywords

Bislama; mutual intelligibility; language and law; language policy; language ideology; English dialects

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1 Introduction

Vanuatu's linguistic diversity is well-attested. More than 100 Indigenous languages (François et al., 2015, p. 2) are spoken across a population of only 300,000 people (Vanuatu National Statistics Office [VNSO], 2020a, Table 1.1). Adding to the mix are English and French: Vanuatu was jointly colonised by Britain and France until its independence in 1980. These are both designated official languages in Vanuatu, along with Bislama, a homegrown creole language (*Constitution of the Republic of Vanuatu*, 1980, Art. 3(1); henceforth referred to as the '*Constitution*'). Although not defined in the *Constitution*, an **'**official language' is presumably suited to contexts such as government, education and the justice system. Indeed, all three languages are used in these domains. An important discussion point of this paper is to

assess the extent and suitability of English, a high-status language, vis-à-vis Bislama, the national lingua franca – particularly in relation to professional workplaces. Our key objective is to test the evidence: do well educated ni-Vanuatu people – with some university education and a concomitantly high level of English comprehension – understand spoken English as well as they understand spoken Bislama?

Schneider (2023) undertook a qualitative critical evaluation of the use of English and Bislama in the Vanuatu Supreme Court by legal professionals and witnesses. She argued that although these two languages are 'equal' at an official level, the practical reality is that English is 'more equal' than Bislama, and this puts Bislama speakers at a disadvantage, relative to their native English-speaking counterparts. Results of the experiment described in the present paper provide objective support for this position. Results indicate that Vanuatu citizens have much more exposure to Bislama than to native varieties of English;[2] they prefer Bislama to English, and feel more confident about understanding it; and they do indeed respond more accurately to Bislama test sentences, as compared to English test sentences.

Very little research has been conducted on how well speakers of Vanuatu's languages can understand each other. Exceptions are Stahl (1994) and Gooskens & Schneider (2016), who assessed mutual intelligibility between some of the country's indigenous languages. Noémie Séverin, a PhD student, is currently investigating the intelligibility across five vernacular languages spoken in the Shepherd Islands and Efate. As for Vanuatu's three official languages – English, Bislama, and French – there is no research we know of that tests how well ni-Vanuatu people can understand them. The present study takes the first step to redress that gap.

In order to provide some context for our experiment, first we review the literature on languages and literacy in Vanuatu (section 2). Then we explain our testing methodology (section 3) and discuss the results (section 4). We discuss the implications of our findings in section 5. We recommend steps that can be taken to raise the status of Bislama in order to improve substantive equality and access for ni-Vanuatu people, using the Vanuatu legal system as the primary illustrative example. Section 6 concludes the paper.

2 Languages and Literacy in Vanuatu

The following subsections discuss the status of Vanuatu's Indigenous languages (2.1), its national language (2.2), and its official languages (2.3). We also review literacy rates in Vanuatu (2.4).

2.1 Indigenous languages

The 2020 census asked ni-Vanuatu people if they were able to speak an Indigenous language. The vast majority (92.2%) indicated that they could speak one easily or with some difficulty, and 84.8% said that they had been raised in an Indigenous language (VNSO, 2020b, pp. 64-65). But an idiosyncrasy of data collection leads Lavender Forsyth (2025a, see companion issue) to estimate that the true percentage of first language speakers of Indigenous languages is in fact lower, at 74.9%. In either case, there is a progressive decline in Indigenous language knowledge for ni-Vanuatu people under the age of 40 (VNSO, 2020b, pp. 64-65). Indigenous languages are being supplanted largely by Bislama (Lavender Forsyth, 2025b). This trend will undoubtedly accelerate as the current generation of children have their own children.

[2] We acknowledge that the boundary between 'native' and 'non-native' varieties is becoming increasingly blurred in the literature, but we still consider this to be a useful metric.

There are tokenistic measures in place to stave off language decline: Indigenous languages have a 'protected' status in Vanuatu's *Constitution* (1980, Art. 3(2)). Also, in 2020, the government formulated its first national language policy (Language Services Department, 2020; henceforth referred to as the '*Policy*').[3] In line with the *Constitution*, the *Policy* recognises the cultural value of Indigenous languages, and encourages their preservation (Language Services Department, 2020, pp. 30–31).

But in reality, Indigenous languages play second fiddle to Vanuatu's two long-standing languages of education, English and French. While the *Policy* does provide for the creation of vernacular language schools (Language Services Department, 2020, p. 27), and while Indigenous languages (and Bislama) are not necessarily banned in the classroom, they are not particularly encouraged, either. They are "allowed" to be a language of instruction, according to the *Policy*, "when necessary", "only to ease understanding of young Ni-Vanuatu children" (Language Services Department, 2020, p. 20). And, ultimately, students must sit their exams in either English or French.

2.2 Bislama

Bislama is widely spoken across Vanuatu (Crowley, 2004, pp. 3-4). The 2020 national census did not ask all respondents what their first language was, but Lavender Forsyth (2025a, see companion issue) estimates that about 25% of the population speak Bislama as a first language. Bislama originated in the mid-1800s as a trading language between Europeans and residents of the Loyalty Islands (now part of New Caledonia) and what is now southern Vanuatu; later, in the 1870s, it was used as a contact language between Australian plantation owners and Pacific island workers (Crowley, 2004, pp. 4-5). In other words, it is a creole; its lexicon is derived mainly (not exclusively) from English, but its grammar reflects features of local substrate languages (Crowley, 2004, p.1). Crowley (2004, pp. 1-2) also points out that Bislama and English are not mutually intelligible; this will be discussed in sections 4 and 5.

Bislama is Vanuatu's sole **national language** (*Constitution*, 1980, Art. 3(1)). Crowley (2004, p. 3) explains that this designation, made after the country's independence from England in France in 1980, was motivated by the desire to avoid having to otherwise make a potentially contentious choice between English and French. In any case, if a national language is meant to mark national identity and unify speakers of 100+ local languages, Bislama is eminently suited to this role.

And, as previously mentioned, Bislama is also an **official language**, along with English and French. Official status confers certain rights upon speakers, at least in theory. Vanuatu's *Constitution* (1980, Art. 64(1)) provides that:

> A citizen of Vanuatu may obtain, in the official language that he uses, the services which he may rightfully expect from the administration of the Republic of Vanuatu.

But the reality is somewhat variable. For example, if someone is accused of a crime, they would have access to a Bislama-speaking lawyer. But the criminal code they are accused of having transgressed is available only in English and French. This type of situation obviously creates inequity of access to government services. Another example is in public education: despite its official status, the use of Bislama in education is constrained. According to the *Policy* (p. 20), "Bislama teaching in classrooms" is permitted (*Policy*, p. 20). But it is unclear

[3] The 2020 *Policy* has a wider scope than the earlier language policy published by the Ministry of Education (2012).

whether this refers to the use of Bislama as a language of instruction, or the teaching of Bislama as a target language; presumably it is the former. At any rate, any Bislama teaching "shall first go through careful consultation with all the national stakeholders before it shall be applied" (Language Services Department, 2020, p. 20). This implies a cautious attitude towards Bislama.

Even by its own community of speakers, Bislama is not always taken seriously. Such is the fate of many contact languages (Wigglesworth, Billington, & Loakes, 2013). In the 1990s, Lynch (1998, p. 275) characterised the relationship that ni-Vanuatu have with Bislama as "schizophrenic": they speak it in a wide variety of situations, but do not consider it a 'real' language. Thirty years later, this observation still holds true, though probably to a lesser extent. A recent survey reports that 86% of ni-Vanuatu respondents consider the ability to speak Bislama to be a "very important" facet of their national identity (Mudaliar et al., 2024, p. 9). It also resonates with a 2019 report on language usage in government institutions, which notes that "people in our rural community would prefer to be communicated to in Bislama in writing as well as in speech" (Bulu, 2019, p. 10). But, at least in relation to writing, the same report (pp. 7-8) indicates that the vast majority (89%) of government communication is still in English, followed by Bislama (7%) and French (4%). This includes a wide variety of communications intended for public consumption including reports, information bulletins, notices, tender documents and court judgments.

Even before 2019 – in 2015 (Mataskelekele, 2015), 2016 (Mataskelekele, 2016), and 2017 (Bulu, 2017) – reports from the Office of the Ombudsman admonish public institutions for not writing in Bislama. Yet this, ironically, is undermined by the Ombudsman's own commentary, such as the following remarks from the 2015 and 2016 reports:

> Because of its lack of technical terms and undeveloped and inconsistent vocabulary and grammar, Bislama is less used in printed official Government documents as well as printed material in the Private sector. The limited range of Bislama makes the translation of French and English official documents into Bislama very difficult and often produces inexact or inappropriate results.
>
> (Mataskelekele, 2015, p. 4; Mataskelekele, 2016, pp. 4–5)

In the 2017 Ombudsman report (Bulu, 2017, p.4), the wording of "[t]he limited range of Bislama" from the above extract is replaced by "[t]he lack of proper vocabulary and grammar in Bislama" (Bulu, 2017, p. 4). Arguably, this is even more dismissive than the 2015 and 2016 editions of the report. Such misinformed commentary about the linguistic inadequacy of Bislama is unfortunately not uncommon. Linguists have long argued that creoles, like any language, are sufficient to meet all communicative needs of their speakers (see Wigglesworth, Billington, & Loakes, 2013, p. 389).

The above quote is omitted from later (2018–2020) Ombudsman reports. Thus there is a heartening change of tone in this space. Also, and significantly, in 2019, the Ombudsman report itself is produced not only in English, but also in French and Bislama – that is, in all three official languages. But in other years – including 2020 – the reports are in English only. This potted history (of the language of Ombudsman reports) highlights the entrenched position of English, but also suggests that Bislama is beginning to be taken a little more seriously by public administrators. The Bislama version of the Ombudsman report is also an exemplar of the viability of Bislama – it demonstrates that its vocabulary and grammar *is* indeed capable of being written in official contexts.

2.3 English and French

The ability to speak English and/or French is normally required for 'white collar' employment in the public or private sector in Vanuatu. The 2020 census reports that two percent and 0.8% of the population acquire English and French, respectively, as a first language (VNSO, 2020a, Table 6.16). (But, due to an idiosyncrasy in 2020 census data collection, these figures are likely higher.) The first author's impression is that most people's ability to speak or understand English is limited. In her experience, in both urban and rural locations, ni-Vanuatu opt almost universally to speak to her, a foreign anglophone, in Bislama (with rare exceptions in twenty-plus years). This includes her encounters with bureaucracy. That said, results from the present intelligibility study suggest that educated ni-Vanuatu people do indeed understand English; see sections 4 and 5.

Despite the equal official status of English and French, English is far more commonplace, at least in the public service. A 2019 online survey by the Office of the Ombudsman found that, in the workplace, Bislama is spoken by 79% of public servants; 20% speak English, and only 1% speak French. With respect to these statistics, the exact wording of the Ombudsman's survey questions is unknown and, surely, individual public servants would use multiple languages in the course of their day – therefore, we would expect the above figures to add up to more than 100 percent. Also, only 107 public servants responded to the survey. This is a low turnout, as the Ombudsman himself acknowledges. Nevertheless, the information is valuable because it provides a general insight into language usage in the public service: French is used far less often than English which, in turn, is used far less often than Bislama. Given the limitations of time and space, we focus on English and Bislama in this study; we do not reflect upon French.

If ni-Vanuatu people speak English at all, it is generally their second, third, or fourth language. In this paper we refer to this L2 as 'Vanuatu English' in order to contrast it with the native varieties. Vanuatu English also contrasts with other non-native varieties spoken in the Pacific, such as Fiji English, Samoan English, Cook Islands English, and Norfolk Island-Pitcairn English, all of which have been profiled in phonological and/or morphosyntactic terms (e.g., cf. Burridge & Kortmann, 2008; Biewer, 2015, 2025). Vanuatu English, as an L2 variety, has received almost no attention in the literature, as far as we are aware. This is probably due to the fact that, proportionally, relatively few people in the country achieve a high level of fluency. Green (2012) examined the distinctive orthographic, morphosyntactic, and lexico-semantic features of the writing of USP students from countries across the Pacific, including Vanuatu. But the broad scope of the study limits her ability to attend to Vanuatu written English in any detail, and her investigation excludes spoken language. Previously, Crowley (1989, p. 44) observed: "In Vanuatu…English is so rarely used in its spoken form even among the best educated people that it is not possible to recognise any features that one would want to recognise as a Vanuatu dialect of English." Vanuatu English also continues to be overshadowed by Bislama, and ni-Vanuatu people presumably aspire to native models of English. However, after such a long presence in the country, we are of the view that the L2 English as spoken in Vanuatu would, at this point in time, have developed at least some identifiable phonological and lexical characteristics arising from the specific local Vanuatu context. This mirrors the rise of contact Englishes in other parts of the South Pacific and the rest of the world (cf. Biewer, 2025). Accent would be heavily influenced by speakers' native languages, which are mostly one of the 100+ Indigenous languages of Vanuatu. Analysis and documentation of Vanuatu English is therefore a task for the future.

2.4 Literacy rates

In addition to oral skills, strong literacy skills would presumably be required for professional positions. The 2020 census asked two questions of participants aged 15 and over: "Can XYZ read a simple sentence in one or more of the following languages?" and "Can XYZ write a simple sentence in one or more of the following languages?", followed by a list of languages: English, French, Bislama, Indigenous (vernacular), Other languages (VNSO, 2020a, pp. 363–364). But for English, French, and Bislama, the census conflates reading and writing results into a single result for 'literacy'. Results indicate that 76.9%, 40%, and 90.1% are "literate" in English, French, and Bislama, respectively. As for Indigenous languages, ability to both read *and* write an Indigenous language is reported separately in Volume 1; Volume 2 reports a conflated "literacy" rate of, 70.9% (VNSO, 2020b, p. xi). These rates are, of course, self-reported.

These relatively high rates for English and Bislama contrast with findings from a 2011 survey by the Asia South Pacific Association for Basic and Adult Education (ASPBAE), which asked people aged 15 to 60 about their literacy skills. Participants were asked what their "preferred official language" was, and then whether they could read in that language. The preferred official languages were 91%, 7.7%, and 1.35% in favour of Bislama, English, and French, respectively. (Note that Indigenous languages were excluded from this survey.) To be classified as "literate", respondents then had to correctly answer eleven out of eleven simple literacy questions. Although 70.5% of respondents were confident that they could easily read in their preferred official language, only 27.6% qualified as literate; a further 38.3% were classified as semi-literate, and 34.1% as non-literate (ASPBAE, 2011, pp. 22–24). The survey was undertaken in Shefa Province, home to Vanuatu's capital, Port Vila, where more educational and employment opportunities exist. If the literacy rate is so low there, it is likely even lower in less developed regions. In summary, the ASPBAE results suggest that only a modest proportion of the overall population is fully literate. Those who are, are far more likely to prefer reading and writing in Bislama over either English or French.

The ASPBAE survey also found that only 43.1% of respondents completed primary school, 13.2% completed Year 10, 4.9% completed Year 12/13, and 0.5% completed university (2011, p. 10). By contrast, the 2020 census data, surveying those aged 15 and over, reports higher rates of school achievement: completion rates of 59%, 34.3%, and 2.4% for primary, secondary, and tertiary education, respectively (VNSO, 2020a, p. viii). In either case, the percentages are low, and notable from both surveys is the large drop-out rate between primary and secondary school. For this intelligibility study, we tested only university students in Vanuatu; that is, people who had completed Year 12/13. This cohort represents a tiny fraction of the population, and the subset most likely to be proficient in English or French, whether spoken or written. This is important to keep in mind when reflecting upon our test results.

3 Method

It has often been noted that there are no universally agreed-upon best methods for measuring intelligibility and comprehensibility. Gooskens (2024) provides an overview of frequently-used methods and discusses their advantages and disadvantages. The choice of the method to be used in an investigation depends on a large number of practical factors, such as time and funds available and the background of the subjects. Even with sufficient time and money and subjects who are able and patient enough to undergo complicated and lengthy tests, the choice of method still depends on the precise aim of the investigation.

In our case we wished to test the intelligibility of spoken native and non-native varieties of English as well as Bislama amongst educated inhabitants of Vanuatu. Our hypothesis is that even well-educated Vanuatu participants (that is, current university students) will understand Bislama better than any variety of English. This means that we needed a test that would be able to measure a high level of intelligibility without reaching a ceiling effect since this would make it impossible to compare how well the listeners could understand the various language varieties. We opted for the use of a test based on read aloud sentences since this allows us to test the same types of sentences with the same words or concepts in several language varieties. An additional criterion for the choice of testing methods was that they should be easy to administer for a large number of participants in a limited amount of time and that working memory, background knowledge, and context should not be confounding variables in the assessment of intelligibility.

Kang et al. (2018) compared five functional intelligibility measures: true/false statements; scalar ratings of intelligibility; fill in blanks in nonsense (grammatical but semantically meaningless) sentences; fill in blanks in low-pass filtered sentences (where only the target words were recognisable); and a transcription task. These measures were applied to six varieties of L1 and L2 English. The L1 varieties were American and British English. The L2 varieties were English spoken by L1 speakers of Hindi, Afrikaans, Mandarin, and Mexican Spanish with a high proficiency in English, but still with a noticeable accent. The listeners had the same backgrounds as the speakers. The five measures showed significant but weak relationships. This shows that the measures tap into different constructs. To evaluate the five intelligibility tests the results were compared to the comprehension scores of a Test of English as a Foreign Language (TOEFL)-type listening comprehension test with the same speakers. The task featuring nonsense sentences was the best predictor of the TOEFL-type comprehension test. However, we did not find this test suitable for our purpose since we expected the task to be too unnatural for our group of participants and in addition it would be problematic to construct the testing material. The words included in the test sentences should be selected from frequency lists and comparable frequency lists are not available for English and Bislama. We therefore decided to use the task that was the second-best predictor of the results from the TOEFL-type comprehension test, the true/false statements. This test has been used successfully in previous investigations. In addition to the functional test, we also asked the listeners to make judgments about how well they could understand speakers of the different varieties. More details about the tests are provided below.

Our study is motivated by the wish to establish how well professionals in Vanuatu can understand the different varieties of English and Bislama, relative to each other. However, it should be noted that none of the measurements that we used are ecologically valid. Communicative success is determined by both linguistic and extra-linguistic context, but the sentences used in our study are presented in isolation and have no such context. Still, given the results of previous research we expect the methods to be able to express the processing costs for inhabitants of Vanuatu when trying to understand speakers of language varieties that they may need to communicate with in their professional lives.

3.1 Languages

We wanted to test the intelligibility of six language varieties: five English varieties and Bislama. As discussed earlier, Bislama and English are the languages that professionals working in Vanuatu will most likely hear in the course of their employment. In their professional lives, educated ni-Vanuatu people will come in contact with native speakers of English, particularly from Australia and New Zealand, but also from other parts of the world.

In addition to Bislama and Vanuatu L2 English, we included native English from the following countries in our investigation: Australia, New Zealand, the United States, and Great Britain.

3.2 Participants

Since it is well-educated ni-Vanuatu who are most likely to speak and understand English well, we decided to use university students as our test subjects. We tested participants from Vanuatu, and participants from Australia were our control group. Table 1 provides a general demographic breakdown of the two groups.

Table 1. Participant information

Group	Total Participants	University students	University Graduates	Average Age	Gender (Female / Male / Other)
Australia	55	64%	36%	30	42 / 12 / 1
Vanuatu	58	100%	0%	24	28 / 30 / 0
Groups combined	113	82%	18%	27	70 / 42 / 1

We made several adjustments to ensure that the data was fit for purpose. Vanuatu participants were recruited at the University of the South Pacific (USP) in Port Vila. With the assistance of USP colleagues, the first author posted flyers around campus, offering student participants 100 vatu of phone credit in exchange for their participation. By contrast, Australian participants were initially recruited from online classes at the University of New England in Armidale NSW Australia. The survey was subsequently circulated online for colleagues to distribute at other universities. It was also posted to Facebook. Anyone over the age of 18 was encouraged to participate.

The data in the present study includes only participants who indicated that they had grown up in either Australia or Vanuatu. Furthermore, we also filtered on the basis of education and age. We excluded Australian participants who indicated that they had no tertiary experience (either as a university graduate or a university student). Also, because the Vanuatu participants were generally young, we filtered out Australian participants over the age of 45. The resulting groups of Vanuatu and Australian participants are roughly comparable in terms of group size, education level, and age. One exception is gender: in the Australian group, there was a higher percentage of female participants.

3.3 Procedure

The experiment was presented in the following order:

First there was a background questionnaire. This section gathered demographic information. Participants were also asked opinion questions about the six varieties on various measures, and then to identify each of the varieties played to them (see section 3.4).

This was followed by a test of comprehension and reaction times (comprehension test). The test was preceded by four training sentences, half false and half true, to make the listeners familiar with the task (see section 3.5).

The experiment was offered to participants differently. For Australian participants, the experiment was offered online using an online experiment creation tool called PCIbex (Zehr

& Schwartz, 2018), utilizing javascript. Vanuatu participants were offered the test in person instead, on a computer loaded with E-Prime software version 3 (Psychology Software Tools, 2016). Both PCIbex and E-Prime have the capacity to record accurate response times data. We assume that in the present day and age, online technology is sufficiently reliable for the purposes of reaction time testing (Anwyl-Irvine et al., 2021). That said, the infrastructure is less reliable in developing countries like Vanuatu. For this reason, we considered that it was not practical for the Vanuatu participants to undertake the online test.

The experiment in both modalities was identical. Instructions were given on the computer screen in English. Participants completed the background questionnaire, followed by the comprehension test. Participants were instructed to wear headphones. However, since Australian participants were able to do the experiment online, their listening environment was not controlled for. By contrast, Vanuatu participants did the experiment on the first author's laptop. It was administered to them in a quiet room on the USP campus, and they were given headphones. The first author guided participants through the background questionnaire and the training sentences for the comprehension test. But the comprehension test itself was undertaken independently by Vanuatu participants, as it was with Australian participants.

As a consequence of using these two methods of administration, while we consider the *true/false* responses to be interpretable and comparable across the two (Vanuatu and Australia) participant groups, we are unable to interpret and compare the *response time* data across the two groups. This is due to the particular sensitivity of response time measurements. However, we are able to compare within groups in relation to response time (that is, we are able to compare response times across language varieties within each of the two groups). This is discussed in more detail in section 3.6.

3.4 Background questionnaire

Before the comprehension test, the participants were asked to fill in a questionnaire about their background; see Appendix A. This included basic demographic information about age, gender, places lived in, language background, educational background and handedness.

The questionnaire also incorporated some opinion questions, using a Likert scale (see section 4). Unlike experimental intelligibility measures (such as a comprehension test), Likert-type judgments of intelligibility are more subjective. They give a more holistic picture and may be more strongly influenced by non-linguistic factors such as attitude towards the place where the variety is spoken and its speakers. Attitudes towards each of the varieties may play a role in the effort that the participants put into understanding them (Gooskens, 2024, pp. 86–89).

Participants were asked to estimate how well they understood each of the varieties, then how well they liked each of the varieties, on a four-point scale, with the end points being 'not at all' and 'a lot'. They were asked how often they were exposed to each of the varieties on a five-point scale ranging from '(almost) never' to 'at least once a day'. For all opinion questions, participants had the additional option of answering 'I don't know'.

The last task for participants in the questionnaire was to listen to Article 1 of the *Universal Declaration of Human Rights* (United Nations General Assembly, 1948), which was read aloud (in English and Bislama) by the same speakers who recorded the true/false statements used in the comprehension test. (English and Bislama versions of Article 1 are in Appendix A.) Participants heard six recordings of this text (one from each of the six varieties), presented in a random order. Each text was played only once. For each recording, participants selected the variety they thought they were hearing (i.e. American English, Australian English, Bislama, British English, New Zealand English, or Vanuatu English) in a multiple-choice task.

Participants were allowed as much time as they needed to answer the question. They could choose the same variety more than once. They could also indicate that they did not know. They could change their answer before progressing to the next recording but could not reverse backwards through the questionnaire to change an answer retrospectively. The purpose of this task was to give us an indication of how familiar the participants are with the varieties (in addition to the information they gave on the exposure scale mentioned above).

3.5 Comprehension and reaction time test

We tested the participants with a task where they had to decide as quickly as possible whether the statements presented are true or false. This task requires a listener to process the overall information of an utterance. The assumption is that more intelligible speech will allow listeners to correctly understand the message and that the decision will be faster for more intelligible language varieties than for varieties that are more difficult to understand.

3.5.1 General principles in devising the sentences

The 18 true and 18 false statements used in the present study were inspired by the sentences used in Munro & Derwing (1995). However, the sentences in that study were designed in such a way that the truth values could easily be determined by North American listeners on the basis of everyday knowledge. If we had used these sentences in our study this might have resulted in wrong or delayed answers among the Vanuatu participants due to the unfamiliar content of the sentences rather than to the intelligibility of the sentences themselves. The sentences that the participant hears should require little cognitive processing and not depend on the background knowledge of the participants. On the other hand, we also tested Australian participants as a control group. Therefore, we made sentences that were adapted to the everyday knowledge that inhabitants of Australia and Vanuatu could both be assumed to have. Only sentences that were deemed unmistakably true or false to inhabitants of both Australia and Vanuatu in a pen-and-paper pilot experiment were included in the experiment. The full list of the English and Bislama sentences can be found in Appendix A.

3.5.2 Method for devising the English sentences

We wanted the sentences to reflect the structural variation that occurs in spoken English, so we created a variety of sentences that differed in clausal complexity and polarity. Words for all the sentences were drawn from iWeb: The Intelligent Web-Based Corpus (Davies, 2018). This is a 14 billion word corpus, drawn from 22 million web pages. To ensure that the sentences were maximally accessible, we adhered to a general set of principles when devising the English sentences:

1. The verb is the core of the sentence. Verbs were drawn from the top 1000 of all lexical items in the corpus. Other major lexical items (nouns, adjectives, adverbs) were drawn from the top 3000 of all lexical items.
2. Each lexical verb is used only once. Some modals and auxiliaries, and words in other major classes (nouns, adjectives, adverbs) are used in more than one sentence.
3. All sentences are written in the grammatical non-past (‘present’) tense. This was the most appropriate tense to use in the context of true/false questions, which posit general truths (or falsehoods).

4. Four of the 36 sentences (11%) are negated either morphosyntactically or lexically (e.g., *never*); this is consistent with the level of negation in other corpora (see Jiménez-Zafra et al., 2020).
5. Depending on the level of formality and planning involved, English speech is comprised of a mix of simple and complex sentences, as well as sentence fragments, which are not being tested here. Of the 36 English sentences, eleven were complex (having two clauses). The remaining 25 were monoclausal, of which sixteen had other types of complexity: four had either morphosyntactic or lexical negation; five had passivisation; and seven were modal plus lexical verb constructions. The remaining nine sentences contained just a single verb.
6. Spoken language uses the passive voice (particularly the *be* passive) less frequently than written language (Leech et al., 2009, pp. 146-147, p. 164). On the other hand, passives are a notable feature of the kind of bureaucratic language that professionals are likely to encounter, and we therefore considered it important to test comprehension of this specific structure in English. Biber et al. (1999, p. 476) reported that passives occur in 25% of finite verbs in academic text, and in 15% of finite verbs in the news. But in the 25 years that have passed since the publication of this study, the use of passive voice has been under sustained attack by Plain English advocates. We think that the Plain English movement has made inroads into academic and legal writing in the intervening years, and that the usage of passive voice has probably decreased since 1999. Therefore we included five English passive sentences, which comprises 13.8% of test sentences. To elicit common passive constructions from the corpus, we did a search on collocations of 'is VERB by NOUN' and 'are VERB by NOUN' expressions. We constrained the search to generate only the strings that occurred at least 50 times in the corpus. In Bislama, the passive voice does not exist. However, the words in the Bislama sentences were arranged to reflect the change in focus achieved by the use of passive voice in the English sentences.

3.5.3 Method for devising the Bislama sentences

After the test sentences were devised from the English language corpus, they were then translated into Bislama. The priority for translation into Bislama was to be as consistent as possible with the meaning and information structure of the English sentence, while retaining the sentence's true/false status, and sounding as natural as possible. This means that what is a simple sentence in English might be complex in Bislama, or vice-versa. Thus we were flexible in our creation of the Bislama sentences so as to reflect, as accurately as possible, the message in the English sentence. Such rearrangement is an inevitable by-product of translation.

3.5.4 Design

We used a Latin square design. Each participant listened to 36 sentences: six sentences per language variety; three false and three true statements in each language; and they never listened to the same sentence twice. The result is a design with six different versions as shown in Table 2. The test sentences were presented in a different random order for each participant. In this way we made sure that the potential effect of fatigue was the same for all language varieties and all test sentences in our investigation.

Table 2. Design of the experiment. The numbers refer to the sentence numbers.

	Version					
Notional Sentence	1	2	3	4	5	6
1-6	Vanuatu	Australian	NZ	American	British	Bislama
7-12	Australian	NZ	American	British	Bislama	Vanuatu
13-18	NZ	American	British	Bislama	Vanuatu	Australian
19-24	American	British	Bislama	Vanuatu	Australian	NZ
25-30	British	Bislama	Vanuatu	Australian	NZ	American
31-36	Bislama	Vanuatu	Australian	NZ	American	British

3.5.5 Speakers and recordings

Speakers for the six recordings were male, and born and raised in the country of their target variety. The language features of all speakers were characteristic of the variety spoken in that country. The recorded speaker of Australian English had a classic 'general' accent of Australian English, tending neither towards overly-cultivated or overly-broad. The New Zealand English speaker had a broad accent and slow speech. The American English speaker had an educated American accent; a careful listener could notice his Texan origins. The British English speaker had an educated accent from the south of England. The Vanuatu English and Bislama speakers were recruited from a tomato farm in regional Australia where they were working. Both came from regional Vanuatu and spoke Bislama fluently; Vanuatu English was not their first language.

The speakers were instructed to read all sentences aloud at normal speed, with each sentence being a separate intonation unit (i.e., falling intonation at the end of each sentence). Recordings were rerecorded if they contained dysfluencies or any other errors.

Recordings were made in a quiet environment on a Zoom H4 audio recorder. Sound files were saved in an uncompressed 16 bit/44.1 KHz .wav format. Recordings were modified to normalise the length between the offset of the spoken sentence and the audio. Additionally, the volume of the recordings was edited to make the volume equal; this was done with the open-source software package, Audacity. Lastly, noise was removed from the audio by running an automatic denoising algorithm in PRAAT (Boersma et al, 2024).

3.5.6 Task

The participants listened to each sentence and were then asked to make true/false decisions as quickly as possible by pressing one of two keys, M and Z, on a Standard English Qwerty Keyboard. The M key (to the right) represented a true reply, and the Z (to the left) represented a false reply. The participants were told to listen carefully to each statement and to press the appropriate response button as quickly as possible. They were told to strive for both speed and accuracy. Once a selection was made, participants were unable to change their answer and the screen moved on to the next question. There was a 500 millisecond delay between the response and the presentation of the next sentence.

3.6 Data processing

Each true/false statement received a score of 1 if it was correct and 0 if it was incorrect. The intelligibility score can be expressed as the average proportion of correct answers (between 0

and 1) and as reaction time in milliseconds: the more correct answers, and the faster the responses, the higher the intelligibility. So this test measures how difficult a message is to understand (correct answers) and how much time it takes a listener to understand it (processing time). Reaction times are a valuable addition to a task like the true/false task because the task requires a binary choice. This binary choice brings the risk of a ceiling effect, in which participants perform (almost) perfectly correct, which will limit the ability to interpret the results. Reaction times measure the time it takes people to come to an answer. Even if people ultimately give the correct answer to the question, reaction times can detect the difficulty participants had to make the decision. Therefore, reaction times are a more detailed measure of comprehension than correctness data alone.

The response times were processed to control for speaker speed and resulting audio length. Without repairing the data in this way, we would not be able to interpret the response times because we would be interpreting the differences in speaking speed instead. Firstly, two of the authors independently identified and subsequently compared and agreed upon the timepoint in the sentence in which the participant was able to determine the truth value of the sentence. This timepoint was used to determine the response time *cutoff* time (see Table 3). This was done per sentence per language variety. Subsequently, we repaired the response times by subtracting the full response time with the cutoff time. Therefore, response times reflect the time it took a participant to respond from the pre-determined cutoff point for that sentence in that variety.

Table 3. Average cutoff time per language (milliseconds)

Language	Average Cutoff Time
Bislama	3976
New Zealand	3620
American	3199
British	2849
Vanuatu	3598
Australian	2402

Note. Cutoff time represents the time in the audio at which point a decision could be made. The lower the number, the earlier a decision could be made.

4 Results

We are interested in comparing how well Vanuatu listeners can understand their own lingua franca (Bislama) as compared to the non-native variety, Vanuatu English, and four native varieties (British English, American English, Australian English and New Zealand English). We expect Vanuatu participants to perform best in Bislama due to their greater familiarity with this language, as discussed in section 2. We also expect Vanuatu listeners to understand Vanuatu English better than native varieties of English because it is the local variety, learned in school as a second or (more typically) a third or fourth language.

As a control group we include Australian listeners. We expect the Australian listeners to understand Australian English better than any other variety. We also expect them to outperform Vanuatu listeners in comprehending at least the native varieties of English, due to their native speaker advantage. Conversely, we expect Australians to have poor comprehension of Bislama, because Bislama is not spoken in Australia.

Sections 4.1 to 4.4 review the results of the background questionnaire. In 4.1, we discuss the results of the test of participants' ability to recognise and identify the six varieties. Then in 4.2 to 4.4, we review their responses to our opinion questions, which provide a context for interpreting the intelligibility test results. Survey questions probe the following areas: exposure to the varieties (section 4.2); attitudes towards the varieties (section 4.3); and self-reported comprehension of the varieties (section 4.4). In section 4.5, we discuss ni-Vanuatu and Australian listeners' comprehension of the six language varieties, as measured by the accuracy of their responses, and in section 4.6 we discuss response times. Appendix B summarises all of these results into a single table.

4.1 Ability to recognise the different varieties

As mentioned in section 3.4, participants were played a recording of Article 1 of the *Universal Declaration of Human Rights* as spoken in five varieties of English, plus Bislama. They were asked to identify which variety they were listening to. The wording of the question and answer choices was as follows:

> *You will hear six recordings. Please say what language variety you think you hear.*
>
> *This is:*
> *Am = American English*
> *Au = Australian English*
> *Bi = Bislama*
> *Br = British English*
> *NZ = New Zealand English*
> *Va = Vanuatu English*
> *0 = I don't know*

Figure 1 shows that Vanuatu participants successfully identified Bislama in 50 out of 58 recorded responses (with an 86% accuracy rate). When there was confusion, Bislama was mistaken for Vanuatu English in seven out of eight instances (see Figure 2). Along similar lines, Vanuatu participants correctly identified Vanuatu English most of the time (44 out of 58 responses, or 76% accuracy rate), and misidentifications were attributed to Bislama in five of these cases (see Figure 2). There was one 'I don't know' response, and the remaining eight misidentifications were spread across the native English varieties, suggesting that the ni-Vanuatu respondents who struggled simply have insufficient exposure to all varieties of English, and could not tell them apart.

The misidentification of Bislama for Vanuatu English and vice-versa makes us wonder whether the two home-grown varieties may fall into the same 'cognitive category' in the minds of some Vanuatu participants. That is, since both are local varieties, Vanuatu participants may not actively or consciously notice them or distinguish between them. Instead, they lump them together into the category of 'the familiar'. Such an explanation resonates with the observation by Preston (2010, p. 102) that before a listener can classify a language, they first have to *notice* linguistic features of that language. In this case, participants mostly engaged in active listening, but lapses may represent the times when listeners recognised the variety as 'familiar' but did

not register the details of which language they were hearing (Bislama or Vanuatu English). Along the same lines, Preston (2010, p. 101) refers to the work of the Japanese sociolinguist Takesi Sibata, who points out that "the average language user is so involved with communicating that he is usually not conscious of the words he uses". Preston adds that nor would they be conscious "of the words others use either" (Preston, 2010, p. 101).

An additional possibility is that ni-Vanuatu people do not consider Vanuatu English to be 'a thing', even though it was listed as one of the options for them to choose, and they had previously been asked opinion questions about all six varieties, so they would have had time earlier in the session to get used to the concept of a 'Vanuatu English'. But if participants assumed that the English spoken in Vanuatu is simply an approximation of a target variety, such as British or American English, and not a variety in its own right, then the choice of 'Vanuatu English' would not have been a logical option for them, and they would have chosen other English varieties instead.

As for the misidentification of Bislama, specifically, perhaps the Bislama text of the *Universal Declaration of Human Rights* is too densely packed with Bislama translations of abstract nouns in English (e.g., *respek* 'respect', *raet* 'rights', *risen* 'reason', *tingting* 'conscience'). The text is more formal than everyday spoken Bislama, which may have caused respondents to think that they were listening to English rather than Bislama.

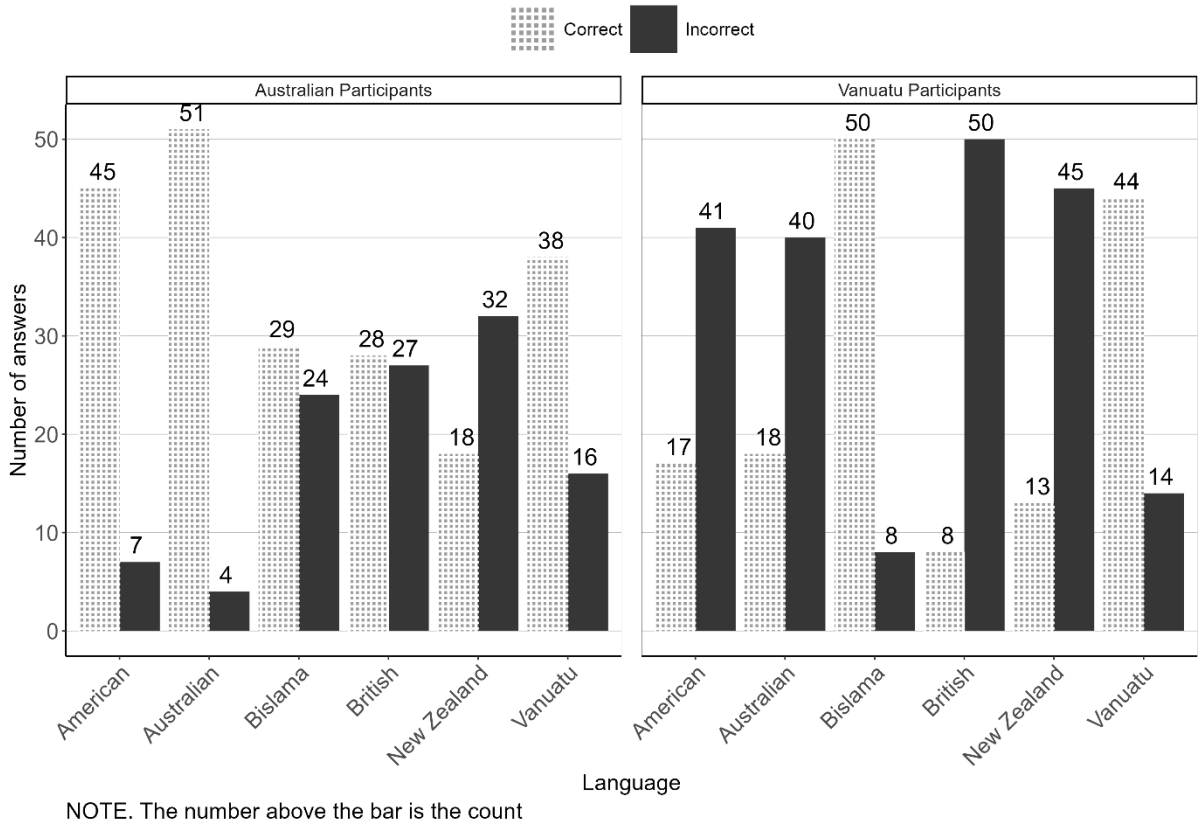


Figure 1. Accuracy of variety recognition

Of the 55 responses to this question by Australian participants, Figure 1 shows that 51 (or 93%) were able to identify their own variety; Australian English received the highest score. Most Australian participants also correctly recognized American English. They may have identified Vanuatu English as the 'foreign' accent that did not sound like any native variety

they were familiar with; Figure 2 shows that they tended to confuse it with Bislama (six cases), which would be equally unfamiliar to them, or they did not know (five cases). As for Bislama, Australian participants may have identified this as the variety that did not really sound like any kind of English; but when it was misidentified, it was mostly confused with Vanuatu English (seventeen cases), or the respondent did not know (six cases). Australian participants performed surprisingly poorly when recognising British English and New Zealand English. Figure 2 shows that they tended to mistake British English for either Australian English or New Zealand English. As for the New Zealand English recording, Australian listeners mostly mistakenly identified it as Australian English. All 55 Australian participants identified as native speakers of English, and we would have expected native speakers to perform much better on this measure, particularly in identifying British English and New Zealand English. These results are difficult to account for. We probed into the data and note that fifteen of the 55 Australian participants have lived for six months or longer in other countries: Canada, Chile, Cyprus, England, Finland, France, Germany, Indonesia, Ireland, Italy, Lebanon, Netherlands, Saudi Arabia, Thailand, and the United States. Arguably, Australians who have lived overseas, especially in non-English-speaking countries, for extended periods of time may have less exposure to different varieties of English – particularly New Zealand English. Unfortunately, we only know that participants lived outside Australia for "six months or more". We do not know if it was for six months, or six years. But even if all fifteen participants spent lengthy periods of time away from Australia, this would still only account for a portion of the misidentifications of British English and New Zealand English.

As mentioned in section 3.2, Australian participants were initially recruited from online classes at the University of New England (UNE), an institution which has traditionally catered to rural and regional students, and students from lower socio-economic backgrounds. It is possible that such students are less exposed to varieties in the media (other than Australian and American English), as compared to students from more prosperous backgrounds, and those who live in the cities. But there is no way of knowing what proportion of the final set of 55 participants fit that kind of profile.

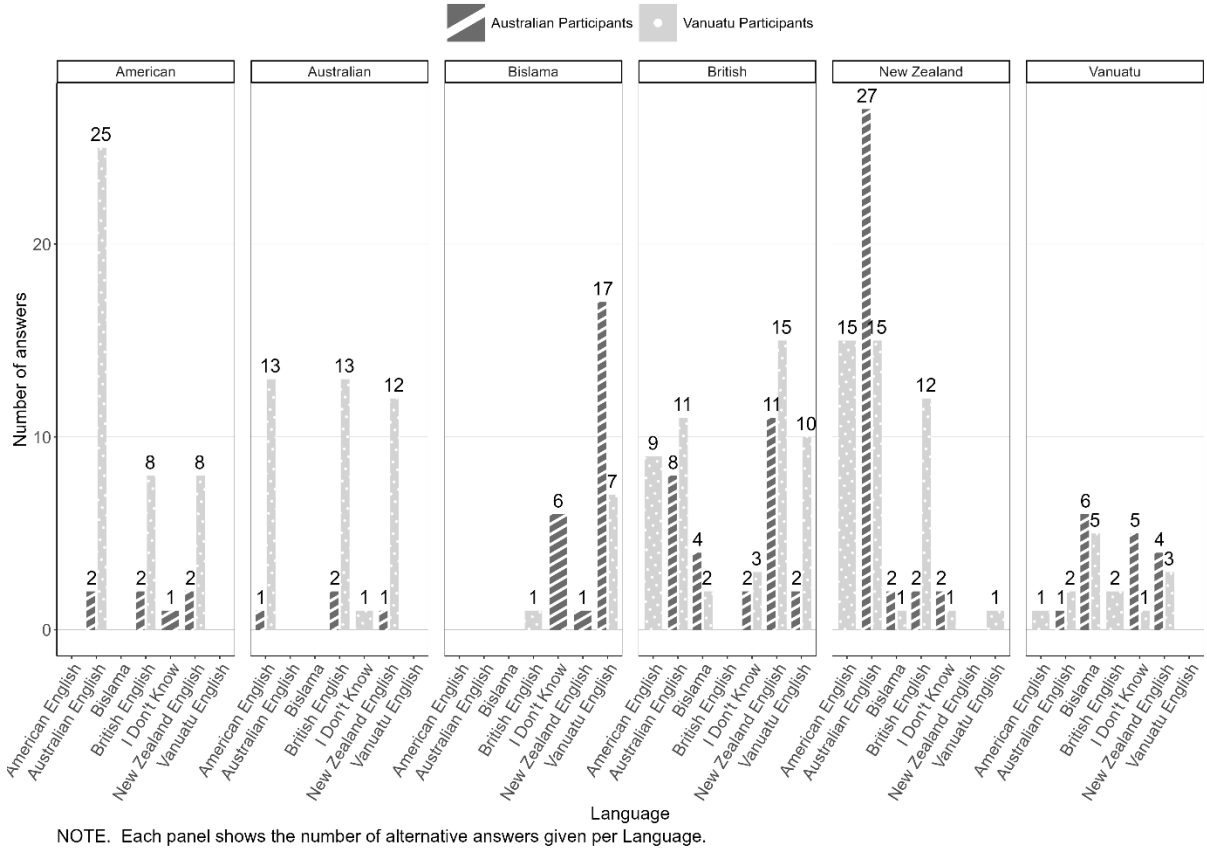


Figure 2. Mistakes of variety recognition

4.2 Self-reported exposure

This question asked participants to rate their exposure to the five varieties of English, plus Bislama, on a five-point scale. The question was:

I hear _____

1 = (almost) never

2 = at least once a year

3 = at least once a month

4 = at least once a week

5 = at least once a day

0 = I don't know

We would expect Vanuatu participants to report having the most exposure to Bislama, and this prediction is borne out in Figure 3. Their reported level of exposure to Bislama is in fact much higher than to any native variety of English. It is also higher than their exposure to Vanuatu English. Their reported exposure to the native varieties hovers around the range of '3' ('at least once a month'). Thus the difficulty Vanuatu respondents had with distinguishing between native varieties of English (at section 4.1 above) is consistent with their reports of low exposure to these varieties: they cannot distinguish between them because they do not hear them often.

A corollary to this is that their reports of which native English varieties they are exposed to could not reliably depend upon their *linguistic* knowledge (because they cannot generally distinguish between the native varieties of English). Instead, their assessment would depend at least in part on which varieties they *believe* they are exposed to, based on their understanding of their sources of information, such as whether a news feed comes from Australia, the USA, and so forth. It is interesting that their reported exposure to Australian English and American English is higher than to British English and New Zealand English (the low '3s' as compared to the high '2s'). Informally, Vanuatu participants told the first author that they hear American English in the media. As for Australian English, the higher score might be attributable to Australia's conspicuousness as the largest (anglophone) power in the Pacific. Along the same lines, their reported lower exposure to British English and New Zealand English may possibly be due to the relatively lower visibility of Britain and New Zealand in the community. But this is difficult to verify.

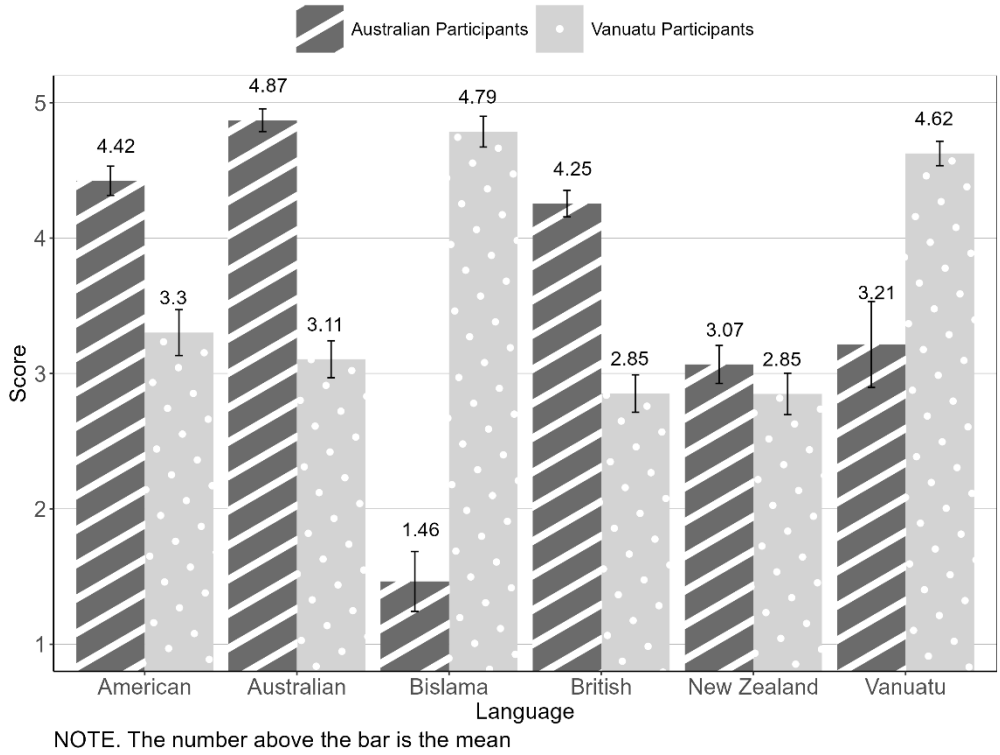


Figure 3. Self-reported exposure to the six varieties, on a scale from 1 to 5

As for Australian participants, their reported exposure to Australian English is highest (4.87), followed by American English (4.42) and British English (4.25). New Zealand English receives only a low '3' (at least once a month). These scores are somewhat consistent with the results in section 4.1, where Australian participants identified American English mostly correctly, but struggled with New Zealand English. British English is a conundrum: reported exposure is 'at least once a week', which is inconsistent with their poor performance in identifying this variety. Australians' exposure to Bislama is very low; 24 of 53 respondents to this question reported (almost) never hearing it, and 25 of 53 said they did not know the answer to this question – which would also indicate non-familiarity. For Vanuatu English, 40 of 54 respondents indicated that they did not know the answer to this question, and two reported (almost) never hearing it.

4.3 Self-reported attitudes

For this question, participants were asked to rank their attitude to the six varieties on a four-point scale. The question they were asked was:

I like ____

1 = not at all

2 = a little

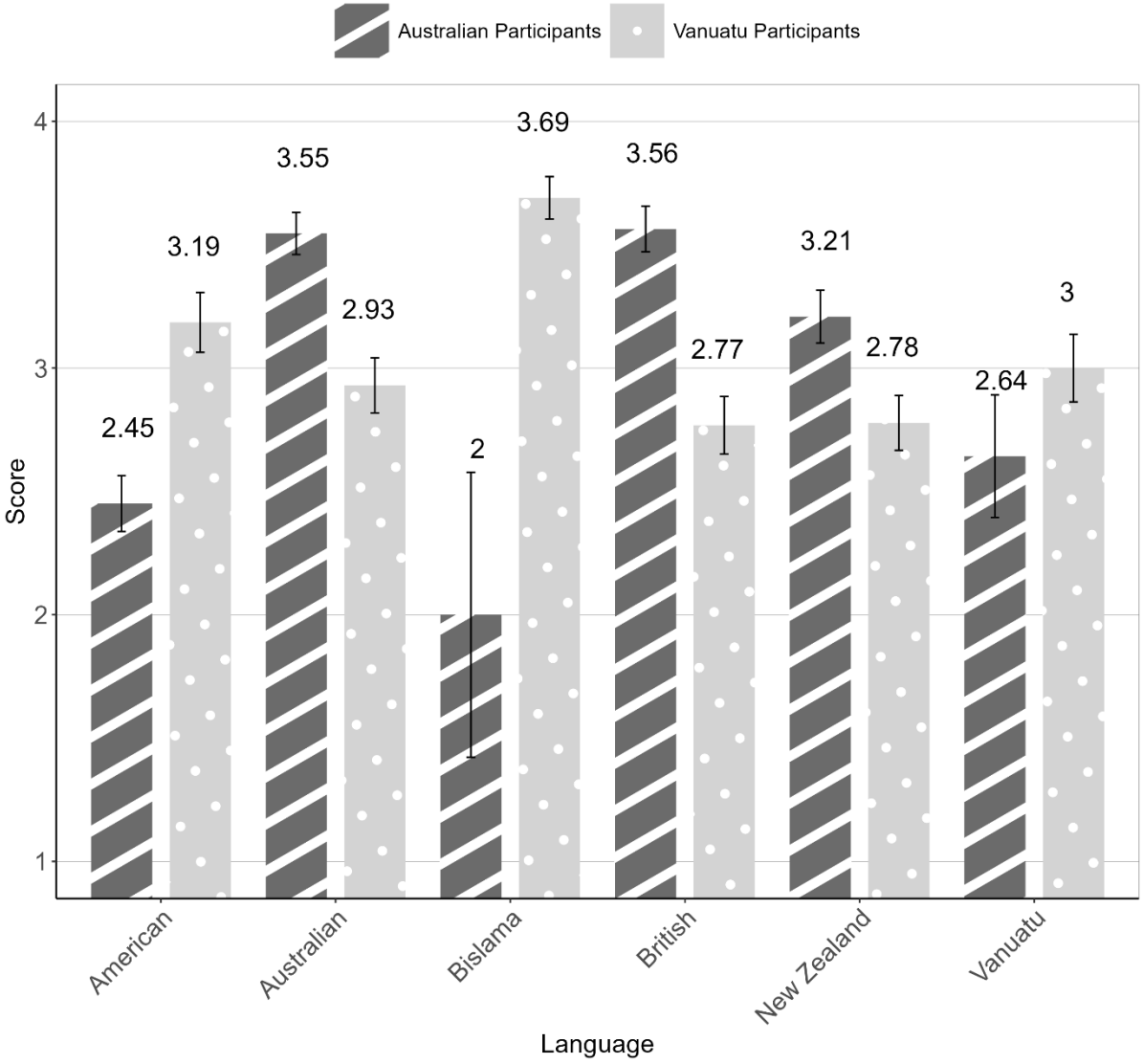
3 = somewhat

4 = a lot

0 = I don't know

As shown in Figure 4, Vanuatu participants' score for Bislama was 3.69 (close to 'a lot'); this score is much higher than that attributed to any variety of English, including Vanuatu English. Of the Englishes, they preferred American English the most, followed by Vanuatu English and Australian English. It is interesting that they prefer American English even more than their own home-grown variety of Vanuatu English. Since ni-Vanuatu are generally not very skilled at picking out American English on the basis of its linguistic features (as per section 4.1 above), it is likely that participants simply relate positively to the cultural associations of this variety.

New Zealand English and British English receive the lowest attitudinal scores from Vanuatu respondents. Their assessment is lukewarm, between 'a little' and 'somewhat'. This corresponds with their reported low exposure. That said, only four and two Vanuatu respondents answered 'I don't know' for New Zealand English and British English, respectively. The vast majority simply have relatively neutral feelings towards these two varieties. These results may indicate that ni-Vanuatu simply do not reflect often upon British English and New Zealand English.



NOTE. The number above the bar is the mean

Figure 4. Self-reported attitudes, on a scale from 1 to 4

Across the native varieties, Australian participants had the strongest preference for Australian English and British English. This was followed by New Zealand English, which received a much lower score. American English came in a distant fourth place. As with Vanuatu respondents, their rankings probably reflect attitudes towards national culture, as signified by each accent.

Bislama and Vanuatu English also received low scores from Australian participants. Our data reveals an 'I don't know' response arose in 50 of 53 responses (94%) for Bislama, and 40 of 54 responses (74%) for Vanuatu English. This suggests that the low score can mainly be attributed to Australians' lack of familiarity with these varieties.

4.4 Self-reported comprehension

Participants were asked to rate how well they understood each of the language varieties. The wording of the question was:

I understand _____

1 = not at all

2 = a little

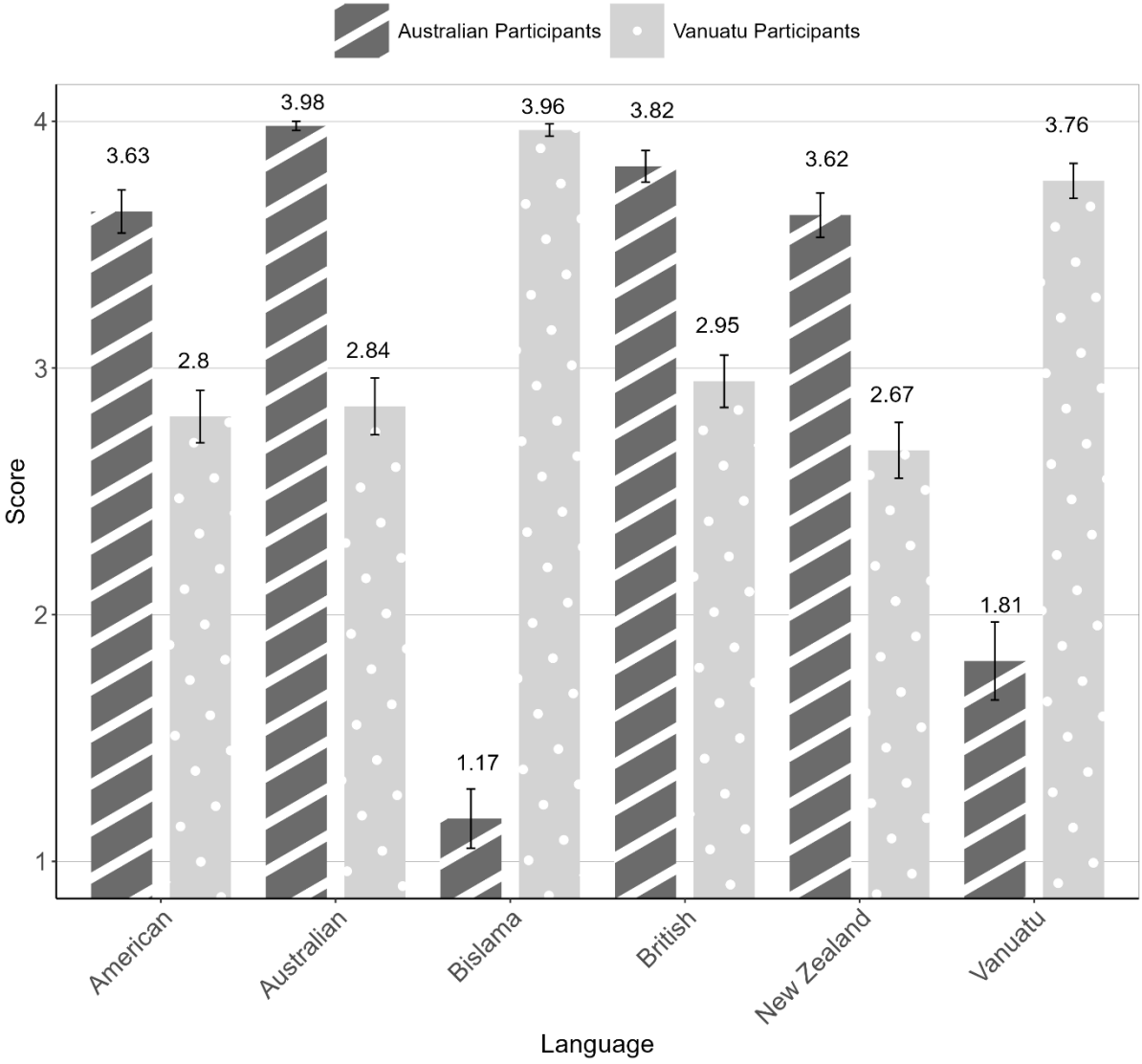
3 = somewhat

4 = a lot

0 = I don't know

Vanuatu participants were highly confident in their ability to understand Bislama and Vanuatu English (see Figure 5). By contrast, their confidence in understanding native varieties of English ranges between '2' ('a little') and '3' ('somewhat'). Despite their more muted attitudes towards British English (see section 4.3 above), they indicated most confidence in their ability to understand this variety. This is followed by a roughly equal confidence in understanding Australian English and American English. They have the least confidence in understanding New Zealand English. The relative rankings of self-assessed comprehensibility across the native varieties is not easy to explain. Perhaps British English is ranked most highly because this is the variety spoken by the former colonisers of Vanuatu, and because school materials have often used British English, especially in Francophone schools. At any rate, the differences in the scores for British English, American English, and Australian English are minor.

By contrast there is a large gap in confidence between Vanuatu participants' reported understanding of Bislama and Vanuatu English, on the one hand, and native varieties of English, on the other. This is likely explained by the fact that ni-Vanuatu people typically do not have a lot of exposure to native varieties of English.



NOTE. The number above the bar is the mean

Figure 5. Self-reported comprehension, on a scale from 1 to 4

Australian participants were highly confident in their ability to understand Australian English, as shown in Figure 5. Their confidence in being able to understand other native varieties was lower, but still closer to '4' ('a lot') than '3' ('somewhat'). Arguably, the higher confidence levels, despite lower reported exposure to non-Australian varieties (see section 4.2), reflects a certain belief that dialectal differences across native varieties will not impede communication.

Consistent with their reported low exposure scores, they expressed low confidence in understanding Bislama; our data indicates that 30 out of 53 Australian participants (57%) indicated they did not know whether they could understand Bislama. Also for Vanuatu English, 22 out of 54 Australian participants (41%) gave an 'I don't know' response.

4.5 Comprehension Test

As mentioned above, accuracy scores for the comprehension test were calculated on a binary scale (0 or 1) and means (m) are shown as proportions (between 0 and 1). These numbers directly translate to percentages by multiplying them by 100.

Statistical tests assessed the significance of differences (between Australians and ni-Vanuatu) in overall performance on the comprehension test. The tests were performed in R Studio using the LME4 package (Bates et al., 2015). Three models were created using GLMER (a generalised linear mixed effects model for binominal values). The models were run with a random intercept for subject, thus taking individual variation into account. No random intercept for item was used because of a failure to converge. Contrasts were set manually to reflect comparison between baseline language varieties (Australian English and Bislama) with the other languages. Formulas used in the tests, manner of setting contrasts manually, and precise statistical outcomes can be found in the script (see Supplementary Materials). The first model compares overall performance on the true/false tests for the five English varieties (excluding Bislama), comparing accuracy scores (binary value, 0 or 1) by group (Australian or Vanuatu) as reflected in Figure 6 in the form of average proportion correct. The second and third model compare the accuracy scores of the language varieties within each participant group as compared to the score on the native language variety, reflected in Figure 7. The second model does this for Australian subjects, the third model for subjects from Vanuatu. The two groups were modelled separately because the comparison to their native language as a baseline made the comparison in one model incompatible.

Excluding the Bislama data in the first instance, Australians' overall success rate in comprehending English language varieties was 94% (m=0.9353). This compares with the performance of Vanuatu participants on the same measure, who had a success rate of 91% (m=0.9081). These results are shown in Figure 6, and in the penultimate row of Table 4. With a p-value of 0.058, this difference is not significant, although it does approach the threshold level of significance (p=0.05).

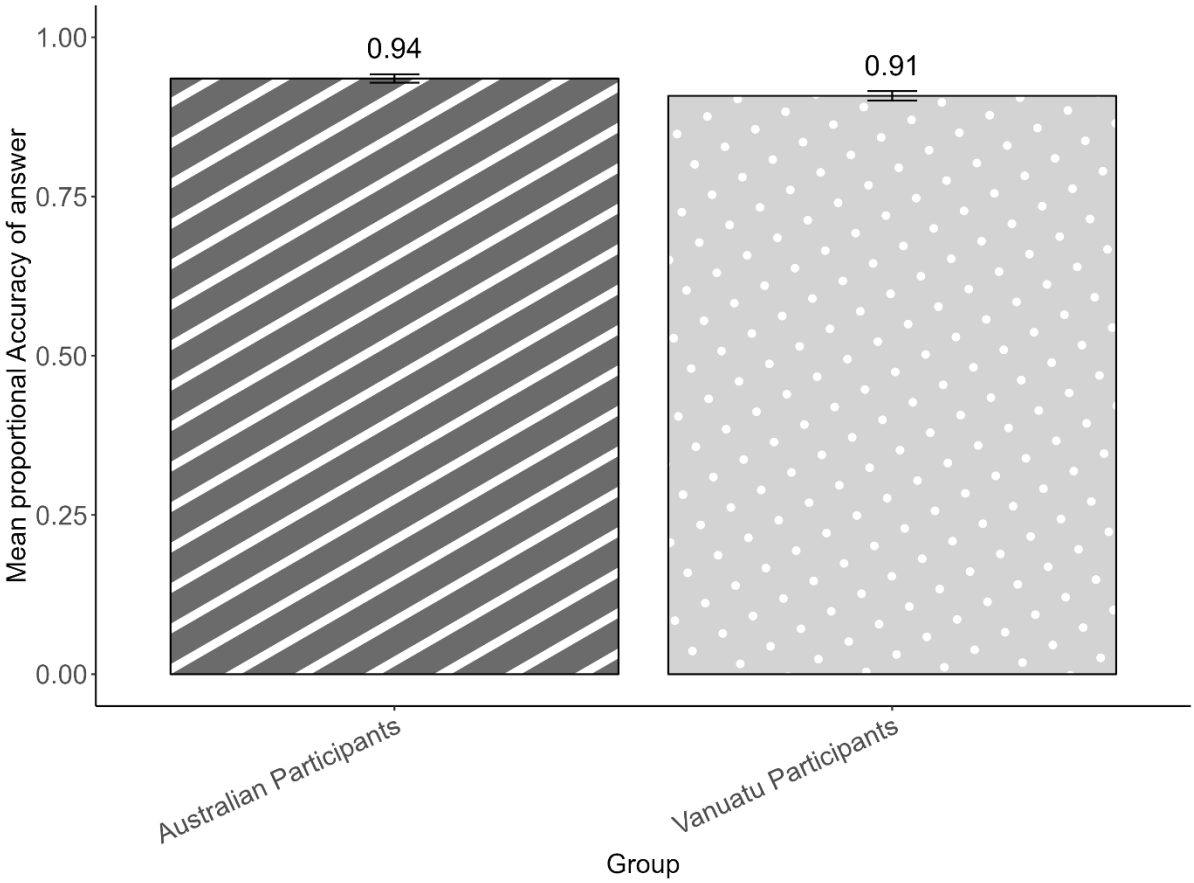


Figure 6. Comprehension of English true/false sentences (excluding Bislama), on a scale from 0 to 1

Table 4. Proportional average accuracy per group

Language	Mean Accuracy in %	
	Ni-Vanuatu	Australians
Native Variety	**96.27**	**94.26**
American English	93.6	93.36
Australian English	87.13	(see Native Variety)
Bislama	(see Native Variety)	57.51
British English	93.38	92.54
New Zealand English	86.93	95.51
Vanuatu English	93.18	92.26
Overall Average, excluding Bislama data	**90.81**	**93.53**
Overall Average, including Bislama data	**91.70**	**87.51**

Table 4 above and Figure 7 below provide a more detailed breakdown by language, including the accuracy of responses to Bislama sentences. The overall averages are in the last

two rows of Table 4. The final row takes all varieties into account, while the penultimate row only shows varieties of English, to recognise that the Australian group was not expected to find Bislama intelligible.

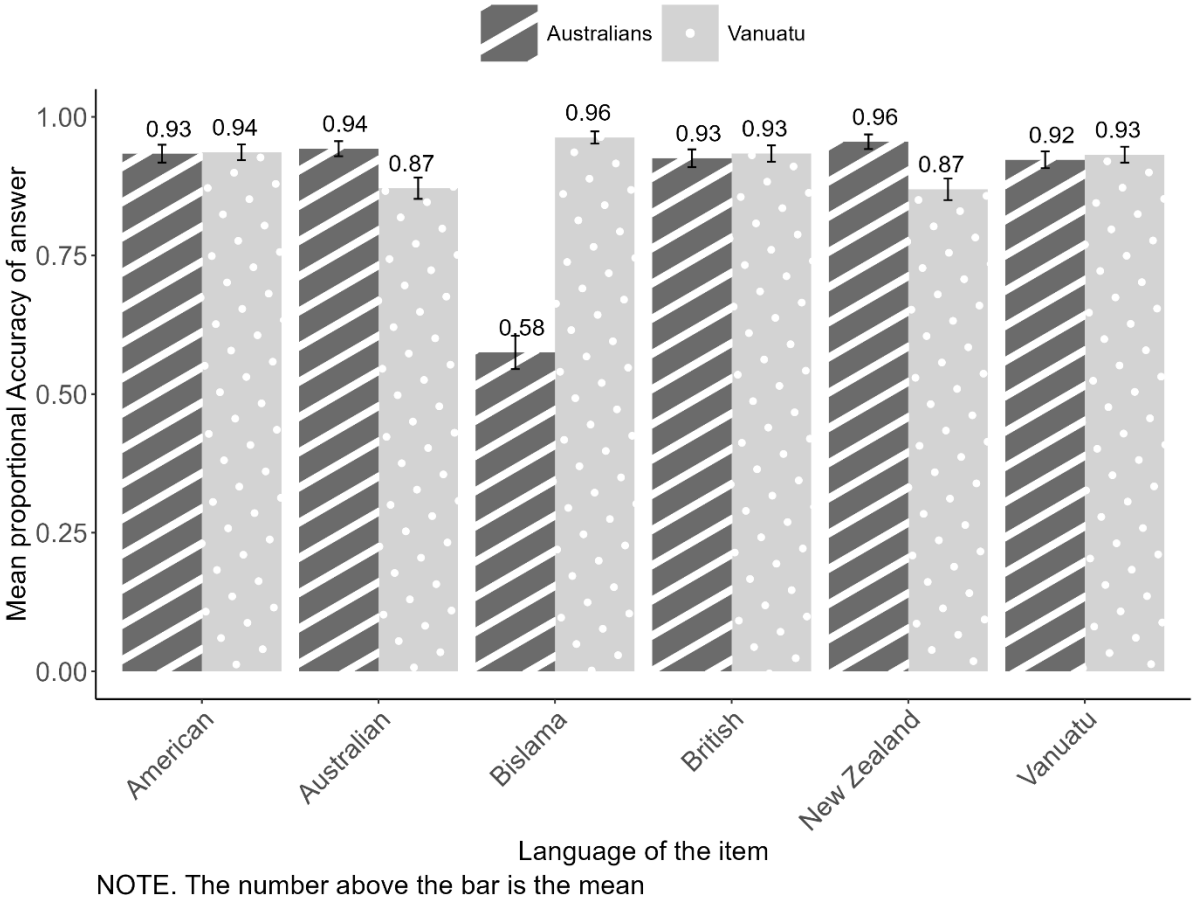


Figure 7. Accuracy of responses to 36 true/false questions in six language varieties

For Vanuatu participants, accuracy scores are lower for Australian English (m=0.8713) and New Zealand English (m=0.8693) compared to Bislama, and the results are significant (p=0.00012, p=<0.0001, respectively). Vanuatu English, British English, and American English scores do not significantly differ from the scores for Bislama (see Tables 4 and 5).

Australian participants performed significantly worse in Bislama (m=0.5751) compared to Australian English (p=<0.0001). No other language accuracy score is significantly different from Australian English (see Tables 4 and 5).

Table 5. Significance of results shown in Table 4. Statistically significant p-values (<=0.05) are bolded.

Language	P-Value	
	Ni-Vanuatu	Australians
American English	0.13937	0.548
Australian English	**0.00012**	(baseline)*
Bislama	(baseline)*	**<0.0001**
British English	0.11377	0.347
New Zealand English	**<0.0001**	0.590
Vanuatu English	0.09388	0.269

Note: '*' = the native variety, which is taken as the baseline for the purposes of statistical analysis. Native variety is Australian English for Australian participants, and Bislama for Vanuatu participants.

4.6 Response times

Response times were collated for correct answers only. Response times for Vanuatu participants are slower than Australian participants' response times, almost across the board; see Figure 8. For example, Vanuatu participants' average reaction time to Bislama sentences is faster than their reaction time to sentences in any other language, at 951 milliseconds. But still, 951 milliseconds is slower than Australians' response time to all varieties – with the exception of Bislama. Australians' average response time to Bislama was 1443 milliseconds. Otherwise, their response times ranged from 735 milliseconds (American English) to 859 milliseconds (Vanuatu English).

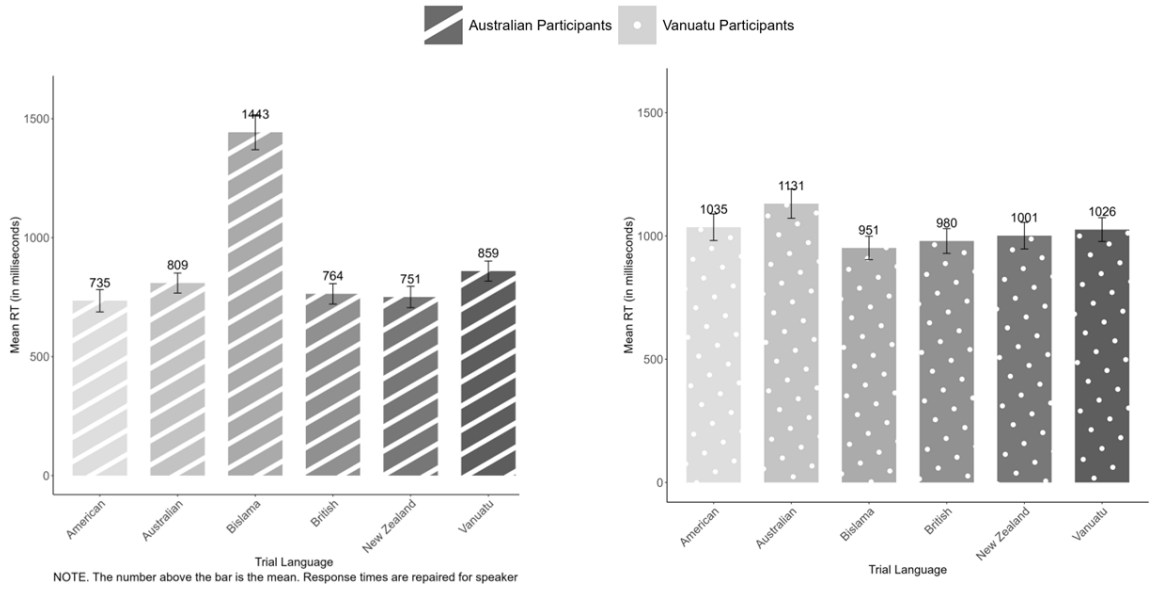


Figure 8. Response times, repaired for length of audio due to speaker speed

After Bislama (which evinced the fastest response time), ni-Vanuatu participants reacted second fastest to British English (980 milliseconds), followed by New Zealand English, Vanuatu English, and American English. Australian English evinced the slowest response time, at 1131 milliseconds.

As explained in section 3.3, in contrast to Australian participants, who took undertook the experiment independently, Vanuatu participants took their test in a controlled setting, as administered by the first author. The first author also noted that participants seemed quite relaxed about answering questions "as quickly as you can" (as they were instructed), in a timed environment. The authors hypothesise that the timed tests were something of a novelty for Vanuatu participants, and that they perhaps did not fully appreciate the importance of answering the questions quickly. For these reasons we consider the response time results across the Vanuatu and Australian participants to not be comparable. But the results have still provided us with a valuable learning experience about cultural appropriateness in testing. In future, we would use a tablet computer with a touch screen, as this is more similar to a mobile phone, which ni-Vanuatu people use regularly. Also, we would emphasise more strongly the importance of working not only as accurately as possible, but also as fast as possible.

5 Discussion and Recommendations

As expected, Vanuatu participants performed better in Bislama than all varieties of English, and for Australian English and New Zealand English, the differences are significant. We had predicted that Vanuatu participants would also understand Vanuatu English better than native varieties of English but, surprisingly, it is comparable to their comprehension of British English and American English.

The results reveal some alignment between what Vanuatu participants think about the six varieties (in terms of reported attitudes, exposure, and ability to comprehend), and how well they actually understand these varieties. Firstly, the results that are clearest and most consistent across the board are for Bislama. Ni-Vanuatu people *prefer* Bislama over any variety of English; they have the most *exposure* to Bislama; they feel most *confident* in understanding Bislama; and, indeed, the comprehension test reveals that they *understand* Bislama better than any variety of English. This has important implications for language practices in professional contexts, which is discussed in subsequent sections.

The results for Vanuatu English show a similar positive alignment across these same measures, but they are not as robust or compelling as the results for Bislama. For instance, Vanuatu respondents report that they in fact like Vanuatu English less than they like American English. Also, respondents had reported that they understand Vanuatu English better than all other English varieties, and that they had a much higher level of exposure to Vanuatu English than to other varieties of English. Both of these measures would suggest a superior comprehension of Vanuatu English. But the test results do not bear this out. It is difficult to explain this discrepancy.

An alternative way of thinking about this is to consider that ni-Vanuatu comprehend American English, British English, and Vanuatu English equally well. Since they are unable to distinguish between English varieties (as demonstrated by the identification task; see section 4.1), the results simply reflect the fact that American, British, and Vanuatu English all sound 'the same' to them. They typically learn British English as a target variety in school, and they are exposed to American English in the media. Perhaps it is not surprising, then, that they understand these varieties as well as Vanuatu English. Nevertheless, it should not be forgotten that their response times for all varieties of English are slower than for Bislama. Ni-Vanuatu

people need more time to process English than their native English-speaking counterparts. As any second language learner can attest, speaking an L2 can be taxing and exhausting, even when communication is successful.

Vanuatu participants perform significantly worse with Australian and New Zealand English. For Australian English, the muted attitudinal ('like a little/somewhat') and self-reported comprehension ('a little/somewhat') scores correlate with the much lower accuracy scores on the true/false test. New Zealand English had low scores across the board, from attitude and exposure scores, to belief in comprehension, to actual comprehension. Given the geographical proximity of Australia and New Zealand to Vanuatu, this is concerning and also difficult to explain. It could be that ni-Vanuatu people have more exposure (online) to the larger, more dominant varieties of American English and British English, as compared to Australian English and New Zealand English, which are highly visible in the Asia-Pacific region, but less prominent on the world stage. Australians and New Zealanders have a noticeable personal presence in Vanuatu (see section 5.1). But it seems that there is still insufficient sustained exposure to these varieties on an interpersonal level for ni-Vanuatu to overcome the linguistic challenges they face when hearing antipodean accents.

Australian participants demonstrate more than 90% accuracy for all varieties of English, including Vanuatu English. Their comprehension of Bislama, at 58%, is slightly better than chance level. This reflects their limited exposure (or, rather, non-exposure) to Bislama. This figure is also evidence for the fact that English and Bislama are different languages – contradicting the persistent folk belief that Bislama is a simplified and corrupted form of English.

As for Vanuatu English in particular, Australian participants' comprehension of it is on par with native varieties, even though their reported exposure is low, as shown in section 4.2. Australians' habitual exposure to many non-native varieties spoken by L2 English speakers in Australia may facilitate their ability to adapt to new accents. But we believe the primary factor in their high level of comprehension is their native speaker advantage. Research has demonstrated that native speakers have a comparative advantage over non-native speakers when processing language in noisy conditions (Golestani et al., 2009). Their ability to segment speech is generally superior to non-native speakers (Sanders et al., 2002). And recent brain imaging research suggests that the brains of polyglots are less activated when listening to their native language as compared to other languages, because less processing effort is required (Malik-Moraleda et al., 2024). This native speaker advantage has real-world implications for professional communication in Vanuatu, as will be discussed in the sections below.

5.1 Implications for working professionals

The study results make it clear that ni-Vanuatu people are comfortable speaking Bislama, and they understand it better than all varieties of English (even Vanuatu English), and significantly better than Australian and New Zealand English. Furthermore, it must be kept in mind that the ni-Vanuatu test participants were university students. Since less than 1% of the Vanuatu population attends university, this group includes the most well-educated and best English speakers in the country. The majority of the population would not speak or understand English as well as they do.

This has implications for ni-Vanuatu people seeking or working in professional positions, such as the education sector. In most Vanuatu schools, English is the target language of instruction. Textbooks are in English, but teachers are often compelled to explain concepts in Bislama or Indigenous languages, because students would not understand otherwise. Even the teachers themselves sometimes struggle with English. In other words, there is a constant

tension between the ideal and the reality; it is unfortunate that the reality of Bislama is widely construed as inferior. We argue that this has a debilitating effect on the power and influence of schoolteachers. If teachers' existing linguistic skills in Bislama and Indigenous languages were not marginalised but, rather, valued and encouraged, they would be much better placed to reflect upon, develop, and pass on the rich diversity of their native languages, instead of sidelining them in favour of a foreign language that has no meaningful role in the daily lives of most of their students.

An additional fact is that many expatriates and visitors to Vanuatu come from Australia and New Zealand, due to the geographical proximity of these countries. The Vanuatu census reports that of the 1717 non-citizens living in Vanuatu, 295 come from Australia and a further 631 come from the Pacific Islands/Oceania, which would include New Zealand; by comparison, only 53 come from North America (VNSO, 2020a, p.69). As for visitors, the Pacific Tourism Association (2024) reports that in July 2022, Vanuatu welcomed 3501 visitors, of which 55% came from Australia and 13% from New Zealand. By comparison, only 2% came from North America. (Since 2022 was still in the midst of the Covid pandemic, these figures could be substantially different in 2025. But reliable information is difficult to source.)

Many of the owners and clients of business/financial services and accounting firms are English-speaking expatriates from Australia and New Zealand. Clients would assume and expect professionals working in this area to speak excellent English, with a high level of communicative sophistication and nuance. This could make all the difference in whether a client provides their business or looks elsewhere. This creates a lot of pressure for ni-Vanuatu graduates seeking work in the industry to have strong communication skills in English, particularly Australian and New Zealand English. There is therefore the danger of professional disadvantage for ni-Vanuatu people working alongside native English speakers in this area. A local USP graduate with excellent accounting/financial skills, but only good (not excellent) English language skills, runs the risk of being passed over for a job, or a promotion.

5.2 Implications for the legal system

The sector where results of this study have the most extreme implications is probably the legal system. This is because, at its highest levels, the Supreme Court (and the Appeals Court) of Vanuatu still operate in English, particularly for civil matters. This has downstream effects for ni-Vanuatu legal practitioners, witnesses, and Vanuatu members of the Vanuatu public who lack easy access to laws written in English.

Fortunately, the Magistrates Court and local Island Court hearings generally occur in Bislama. As for the Supreme Court, proceedings occur in whichever language seems most appropriate (Schneider, 2023). For example, in criminal trials, if all concerned parties were ni-Vanuatu people, including the judge, the lawyers, and the witness, the language of proceedings was Bislama. However, if just one person involved in the case (judge, lawyer, witness) was not a Bislama speaker, then the proceedings were conducted in English.[4] Thus it seems that the linguistic flexibility on display in Vanuatu courtrooms reflects the linguistically sophisticated outlook and adaptability of ni-Vanuatu people, more generally.

Indeed, ni-Vanuatu legal practitioners have long exposure to, and great facility in, the English language. In interviews, they indicated that they actually prefer to work in English; the general sense is that Bislama is not precise enough for the law (see Schneider, 2023). But ni-Vanuatu lawyers are not native speakers of English, and language is an essential tool of the

[4] But one English L2 judge reportedly uses Bislama in court, even in the presence of anglophone legal practitioners.

trade. We argue that, in the high-stakes context of a courtroom, this deference to English potentially disadvantages ni-Vanuatu legal practitioners, relative to their native English-speaking counterparts, many of whom come from Australia and New Zealand.

Legal practitioners are not the only participants in the courtroom; there are also witnesses. Ni-Vanuatu legal practitioners would be far better placed to interact in English than the average witness would be. Witnesses come from a wide range of backgrounds and they cannot reasonably be assumed to have a strong facility in English, if any. But witnesses who know some English – who perhaps use it at work – potentially face suspicion or scepticism from native English-speaking legal practitioners if they choose to testify in Bislama (Schneider 2023). This arises from the uninformed view that someone with transactional English (Basic Interpersonal Communication Skills, or BICS) would also be equipped to engage with higher-level, more abstract language (Cognitive and Academic Language Proficiency, or CALP), such as the kind of language potentially employed in witness questioning (see Eades, 2010, p. 67). Witnesses with BICS may function perfectly adequately in a workplace environment that requires some English. But BICS would be insufficient for a courtroom environment, which assumes CALP skills. Some members of the Vanuatu Supreme Court legal community erroneously assume that witnesses with BICS are 'gaming the system' by pretending to not understand English so as to qualify for a Bislama-English interpreter. This allegedly gives the witness extra 'thinking time' (see Eades, 2010; Schneider, 2023). Use of interpreters can also be disliked because they slow down court proceedings and prevent the lawyer from directly interrogating the witness, which thereby prevents them from mapping facial expressions and body language onto words. Thus, some witnesses may feel pressured to testify in English when it would really be in their best interests to testify in Bislama.

In relation to the Vanuatu public, they also suffer disadvantage from an English-language-oriented Supreme Court because, like ni-Vanuatu witnesses, they cannot be assumed to understand English. This poses an obstacle to the public's unfettered access to the justice system. Expatriate judges themselves are aware of this problem; see Bell (2023, para. 79).

As for written language, Bislama has historically been used to record Island Court decisions (although English has been used more recently). English is favoured in the Magistrates Court and is used seemingly exclusively in Supreme Court judgments. Again, this means that many ni-Vanuatu people who cannot understand written English very well, if at all, are unable to effectively engage with their democracy.

5.3 Recommendations

The ubiquity of English in professional contexts is a product of Vanuatu's history and its contemporary sociopolitical situation. But its English-speaking links with the rest of the world need to be balanced with a better integration of the national language into professional contexts. Increased 'Bislamafication' would benefit not only Vanuatu professionals, but also improve access to information and services for all citizens.

As noted above, the *Policy* (Language Services Department, 2020) does support Bislama. For example, it suggests that foreigners conducting business in Vanuatu be "encouraged to learn and speak Bislama" (p. 22). Many expatriate Australians and New Zealanders are monolingual and have little language-learning experience. The practice of learning Bislama would help them to appreciate, firstly, just how complicated it can be to communicate in another language, even if that language appears (superficially at least) to be closely related to one's own (such as the relationship between English and Bislama). In particular, learners would quickly come to understand that Bislama is not just a simplified form of English. Also, by 'putting the shoe on the other foot', English-speaking learners of Bislama would gain a better

appreciation of the experience of not understanding what is being said around them, and about them – particularly concerning their own welfare. An interesting illustration of this kind of scenario occurred during a role reversal at the Northern Territory Language and Law Conference in 2015: an anglophone judge played the role of defendant in a trial conducted in the Yolngu Matha language (Dias 2015; ICTVPlay2012). This provided a valuable learning experience for Australian legal practitioners who were far more accustomed to the reverse scenario, where they carry out proceedings in English, concerning Aboriginal clients who may speak English as a second, third, or fourth language.

The *Policy* (p. 15) also suggests that Bislama be standardised, "and dictionaries in Bislama… need to be developed" (p. 29). This suggestion is certainly a sign that Bislama is being taken more seriously by 'the powers that be'. A couple of Bislama dictionaries do exist (Camden, 1977; Crowley, 1995), but more contemporary, expanded resources are needed. The same can be said for Bislama grammars: Tryon's (1987) and Crowley's (2004) seminal grammars require supplementation. Also, without being overly prescriptive, the government could form a language committee to facilitate the planning and development of Bislama as an official and national language. The former Icelandic Language Institute offers a useful model: the organisation answered questions about Icelandic and provided benchmarks and guidelines for educators. It also developed genre-specific glossaries, available on the internet (Wikipedia, 2024). A Bislama language committee could have similar objectives. As the depth and range of resources grow, so will the profile and status of Bislama.

It would also be helpful if Bislama (and vernacular languages) were more widely acknowledged as useful, in fact critical, to the successful education of primary school children. We posit that this would increase education quality, including English language outcomes. A quote from a 2014 article in the *Daily Post* provides an apt illustration of (a) the continuing dominance of English in the education system; (b) the begrudging usage of Bislama; and (c) the awareness that teachers struggle with English. The Director of Education Service is quoted as saying that the Vanuatu Teachers' Standards is written in Bislama "to ensure that no one will make excuses that they do not understand what the standards are" (Willie, 2014). Change is afoot, but it is happening slowly.

Even if the profile and status of Bislama in education does improve, English will continue to be an important language in the country. But this study has identified that ni-Vanuatu people struggle to understand Australian and New Zealand English, the varieties spoken by their nearest anglophone neighbours. Ni-Vanuatu participants in our test clearly had received insufficient exposure to these varieties in school. If they go on to work as professionals, and they interact with antipodean speakers of English, then their capacity to understand would presumably improve over time. But students would also benefit from hearing a wider of variety of accents in their learning of English, particularly Australian and New Zealand accents.

As for the legal system, specifically, we have two main recommendations. The first concerns spoken language in the Supreme Court. As noted in section 5.2, if just one involved L1 English speaker is present in a court hearing, all talk changes from Bislama to English. This speaks to the tantamount position of English in Vanuatu's legal hierarchy. But we propose that a more equitable approach be taken. If, for example, one lawyer is anglophone, then that person could be provided with a Bislama-English interpreter. If there is a mixed group, then proceedings could be conducted bilingually. This suggestion would no doubt be received with incredulity by legal practitioners in Vanuatu. Such is the hegemony of English. But, in language as in life, radical ideas of the past lead to previously-unthinkable changes in the present. Change is possible only if the affected parties feel strongly enough about their

situation. If ni-Vanuatu legal practitioners come to see that Bislama is indeed capable of being used in the legal context, then perhaps change will happen, over time.

Our second recommendation, which would facilitate progress of the first, is to take steps to translate legal materials into Bislama. Vanuatu's *Constitution* is now available online in Bislama. But, ideally, all materials – particularly legislation and case law – would be recorded in Bislama as well as English. This would help to consolidate Bislama's role in the legal system: written Bislama would reinforce the use of spoken Bislama in the courtroom, and vice-versa. The *Policy* already provides in-principle support: "Parliament Bills could also be drafted in Bislama since debate in Parliament is held in Bislama" (Language Services Department, 2020, p. 19). And the 2015, 2016, and 2017 Ombudsman reports (Mataskelekele, 2015, p. 4; Mataskelekele, 2016, p. 6; Bulu, 2017, p. 4) state that "it is very difficult, *but not impossible*, to translate the laws of Vanuatu into Bislama" (emphasis added).

Indeed, at first glance, this seems like a daunting task from the perspective of both fiscal and human resources. A huge number of documents require translation. The most important ones can be translated first: key pieces of legislation, and important judgments that affect the entire country, such as constitutional decisions. Following on from this, material can be translated on an as-needs basis. The results would be worthwhile: the use of English would ensure that Supreme Court decisions continue to be accessible to other common law jurisdictions. And the Bislama translations would be accessible to ni-Vanuatu people who are affected, directly or indirectly, by these decisions.

The use of machine translation (MT) could speed the process up significantly. In fact, there is already an existing MT tool that can translate from English to Bislama (Merx, 2025). MT can be trained for a specific genre, such as the law. As it currently stands, when courtroom hearings are conducted in Bislama, the legal terminology tends to be borrowed wholesale from English. If this is problematic, then legal professionals may decide to develop special legal terminology for Bislama. Otherwise, they may decide to continue with the status quo.

6 Conclusion

Although all three official languages have equal status in Vanuatu, the reality is that English is, de facto, 'more equal' than Bislama, and English continues to be widely preferred in professional contexts. But our study shows that, despite their competence in English, ni-Vanuatu prefer speaking Bislama, and they comprehend it better than all varieties of English, including Vanuatu English. We have argued that an increased usage of Bislama in professional contexts, especially the legal system, would help Vanuatu professionals to improve their working lives and improve public access to these services.

We have also found that ni-Vanuatu comprehend Bislama significantly better than Australian English and New Zealand English. This is concerning because Australians and New Zealanders comprise a sizable expatriate group in Vanuatu, and local people seeking work in Australian- or New Zealand-run firms in Vanuatu face the prospect of comprehension difficulties. We recommend that more spoken antipodean English be incorporated into the school curriculum.

Acknowledgements

The authors would like to express their gratitude to the following people who made this research possible: six volunteers who made language recordings, university colleagues who distributed the online survey to their students, and participants in the study. At the University of the South Pacific, we would like to thank A/Prof Robert Early (linguist), Dr Andrew

MacKenzie (campus director), and Ms Shannon Kombe (librarian) for their generous advice and assistance in facilitating the delivery of the in-person survey. We would also like to thank the *Te Reo* editors and two anonymous reviewers for their insightful and very helpful comments. All errors and omissions are the responsibility of the authors. The University of New England supported this research through the provision of travel funding, computer hardware/software, and recording equipment.

Supplementary Materials

The R script used to model the results of the comprehension test can be accessed as an html notebook here: https://doi.org/10.5281/zenodo.17552092

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Appendix A

Background Questionnaire

Question	Response Options
How old are you?	Open response
What is your gender?	Male Female Other
In which country did you grow up?	Open response
Please, list any other countries where you have lived for six months or more	Open response
Do you consider yourself a native speaker of English?	Yes No
How much study have you done?	Some schooling, not a high school graduate High school graduate Technical training University student University graduate
Are you right or left handed?	Right handed Left handed Neither

Text for testing identification of language variety: Article 1 of the *Universal Declaration of Human Rights*

English:

All human beings are born free and equal in dignity and rights. They are endowed with reason and conscience and should act towards one another in a spirit of brotherhood.

Bislama:

Evri man mo woman i bon fri mo ikwol long respek mo ol raet. Oli gat risen mo tingting mo oli mas tritim wanwan long olgeta olsem ol brata mo sista.

List of English and Bislama true/false statements (T= true, F=false).

Four training sentences:

English	Bislama	T/F
You can take some medicine by mouth.	Man i save tekem samfala meresin tru long maot blong hem.	T
Sooner or later, everyone must die.	Maet bae i longtaem o maet bae i klosap nomo, be yumi evriwan yumi mas ded.	T
You can build a city in one day.	Ol man oli save bildim wan bigfala taon long wan dei nomo.	F
Buses move under the water.	Bas i save ron aninit long wota.	F

Test sentences (order is not significant):

	English	Bislama	T/F	Structure
1	Human rights are protected by law.	Raet blong man mo woman, loa i lukaot gud blong hem.	T	Passive
2	Some government positions are held by women.	I gat samfala posisen long gavman we ol woman oli hole.	T	Passive
3	Many people send emails to their friends.	Plante man oli stap sanem email i go long ol fren blong olgeta.	T	Simple
4	Children grow into adults.	Ol pikinini oli gru i kam bigwan.	T	Simple
5	Sometimes people give gifts to their family and friends.	Samtaem, ol man oli save givim presen long ol famle mo fren blong olgeta.	T	Simple
6	Doctors can treat some sick people.	Ol dokta oli save mekem sam sikman i kam gud bakagen.	T	Modal + Lexical V
7	Exercise is important for good health.	Eksasaes hemi impoten blong mekem yumi helti.	T	Simple
8	Many young children enjoy playing with their friends.	Plante pikinini oli laekem stap pleplei wetem ol fren blong olgeta.	T	Complex sentence
9	The police should help the public.	Ol polis oli sud helpem yumi ol man mo woman.	T	Modal + Lexical V
10	Some students study hard to improve their exam results.	Sam studen oli save stadi had blong leftemap eksaem risal blong olgeta.	T	Complex sentence

	English	Bislama	T/F	Structure
11	It is difficult to maintain perfect relationships with all people.	Hemi had blong yumi fren gud wetem evri wanwan man long wol.	T	Complex sentence
12	Sometimes medicine can save a person's life.	Samtaem, meresin i save sevem laef blong wan man.	T	Modal + Lexical V
13	Doctors recommend that people eat lots of fruits and vegetables.	Ol dokta oli talem se yumi mas kakae plante frut mo ol nara grin kakae.	T	Complex sentence
14	Parents want their adult children to visit them.	Papa mo mama we ol pikinini blong olgeta i gruap finis, oli wantem se ol pikinini ia oli mas visitim olgeta.	T	Complex sentence
15	Some people buy their food at the market.	Samfala man oli save pem kakae blong olgeta long maket.	T	Simple
16	Many people like music.	Plante man oli laekem miusik.	T	Simple
17	Some people love chocolate.	Samfala man oli laekem joklet tumas.	T	Simple
18	It is the people in power who make the rules.	Ol bigman nao oli mekem ol rul.	T	Complex sentence
19	Cancer is caused by healthy food.	Wanem we i kosem kansa hemi helti kakae.	F	Passive
20	Access to good beer is required by law.	Evri man i mas gat akses long gudfala kava, hemia loa i talem.	F	Passive
21	Sport is prohibited by law.	I tabu blong mekem spots, loa i talem olsem.	F	Passive
22	Horses use computers.	Ol hos oli stap yusum kompiuta.	F	Simple
23	Babies do not need help with anything.	Ol smolsmol bebe oli no nidim help long eni samting.	F	Negated
24	You do not get sick from bad meat.	Yumi no save sik taem yumi kakae mit we i sting.	F	Negated
25	Industry does not create opportunities for work.	Ol faktri oli no save givim wok long ol man.	F	Negated
26	A dog can read books.	Dog i save ridim buk.	F	Modal + Lexical V
27	Birds can understand the law.	Ol pijin oli save andastanem loa.	F	Modal + Lexical V
28	Fish live on land.	Ol fis oli stap laef long graon.	F	Simple

	English	Bislama	T/F	Structure
29	Flowers can walk.	Ol flaoa oli save wokbaot.	F	Modal + Lexical V
30	If you are angry, it is appropriate to kill someone.	Sapos yu kros, yu save kilim man i ded, hem i oraet nomo.	F	Complex sentence
31	Students never fail their school exams.	Ol studen oli neva felem ol eksam blong olgeta long skul.	F	Negated
32	Birds know how to write.	Ol pijin oli save hao blong raet.	F	Complex sentence
33	Many trees learn to talk.	Plante tri oli lanem hao blong toktok.	F	Complex sentence
34	It is a crime to speak English in most countries.	I agensem loa blong toktok Ingglis long plante kantri long wol.	F	Complex sentence
35	Air pollution will stop climate change.	Rabis gas long ea bae i stopem climate change.	F	Modal + Lexical V
36	People win money if they lose a competition.	Taem man i pleplei long kompetisen be hem i lus bae hemi stil mas winim mani.	F	Complex sentence

Appendix B

Summary of results of opinion questions, language identification task, and true/false test

Language	Reported Attitude (out of 4)		Reported Comprehension (out of 4)		Reported Exposure (out of 5)		Accuracy Recognition		Accuracy True False	
	Vanuatu	Australians	Vanuatu	Australians	Vanuatu	Australians	Vanuatu	Australians	Vanuatu	Australians
American	3.19	2.45	2.80	3.63	3.30	4.42	0.29	0.87	0.94	0.93
Australian	2.93	3.55	2.84	3.98	3.11	4.87	0.31	0.93	0.87	0.94
Bislama	3.69	2.00	3.96	1.17	4.79	1.46	0.86	0.55	0.96	0.58
British	2.77	3.56	2.95	3.82	2.85	4.25	0.14	0.51	0.93	0.93
New Zealand	2.78	3.21	2.67	3.62	2.85	3.07	0.22	0.36	0.87	0.96
Vanuatu	3.00	2.64	3.76	1.81	4.62	3.21	0.76	0.70	0.93	0.92

Note. Instances when participant answered with 'I don't know' have been removed.
Accuracy is displayed in proportions between 0-1.