## Using Ethnotaxonomy to Assess Traditional Knowledge and Language Vitality: A Case Study with the Vaie People of Sarawak, Malaysia

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**Abstract** This article demonstrates the potential of using ethnotaxonomy and nomenclature to assess the vitality status of indigenous languages and traditional knowledge at the ecosystem level. We collaborated with the Vaie people of Sarawak, Malaysia, applying a mixed methodology approach that relies on free-listing to a large extent. We applied the Traditional Knowledge and Language Vitality (TraLaVi) index to assess traditional knowledge and language vitality against five major parameters, specifically: language priority, retrieval of information, knowledge erosion, lexical recognition, and social support for exchange of traditional knowledge. The results show that with a TraLaVi score of 0.84, the Vaie language can be considered "safe". Individuals practicing the traditional occupation of fishing fared better (mean=0.90) than those of the non-fishermen group (mean=0.77). However, when the language vitality was assessed using the Language Vitality and Endangerment assessment tool of UNESCO, the results indicate that the Vaie language could potentially be in the "unsafe" zone, highlighting the differences between the ecosystem based approach of TraLaVi and the macro-approach of UNESCO. However, these approaches can be applied in a complementary manner to generate a more accurate portrayal of the language vitality scenario.

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## Introduction

One of the major contributions of ethnobiology was the conceptualization in the 1960s of a theoretical framework for folk taxonomy (Hunn 2007). Three decades later, the concept of Biocultural Diversity was born, coinciding with a renewed academic interest in the synergy between indigenous languages, traditional knowledge (TK), and biological diversity. This concept paved the way for a new wave of research that focused significantly on the use of vernacular/folk names, analyzing them both from a linguistic and TK perspective (Evans 1997; Kakudidi 2004; Turpin 2013; Unasho 2013; Zariquiey 2014). Researchers have demonstrated that folk names are not mere lexemes, but condensed forms of knowledge with multiple applications. Analyses of folk names have helped us understand how migrant populations adapt to their new ecosystems (van Andel et al. 2014), indicate linguistic stratigraphy (Bostoen 2007), solve important questions related to distribution of iconic trees (Rangan et al. 2015), and unravel mysteries of domestication of food plants (Donohue and Denham 2009). Drawing from a collaborative study conducted with the Vaie people of Sarawak in Malaysia, this article demonstrates an additional dimension of folk taxonomy: the possibility of using folk names to assess a community's TK and language vitality simultaneously (Franco et al. 2015).

## The Vaie People and Language

The Vaie people, popularly known as Ba'ie or Bintulu, speak a language known by various names such as Bintulu, Ba'ie, or Vaie (Asmah 1983; Ibrahim 1971). The community prefers to refer to themselves and