“WE SPEAK WITH OUR EARS”

The Assessment of Children’s Capacity to Pronounce Isolated Phonemes and Their Capacity to Read or Say Words Aloud in the English Language: Implications for Learning to Read

A thesis submitted by

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Abstract

The research in this thesis was initiated in the hope to make a contribution to the field of education and the lives of people who experienced difficulty learning to read. The research compared children’s capacity to pronounce isolated phonemes and their capacity to read or say words aloud, with the view to designing a short version adapted from the International Phonemic Alphabet that can be used as a testing tool and can be made accessible to all teachers and other educational professionals.

The thesis investigates children’s development of the processes underpinning phonemic awareness, auditory conceptualisation, and discrimination of sounds and articulation of words. The questions framing the thesis focus on the relationship with children’s capacity to pronounce isolated phonemes, children’s capacity to read or say words aloud, and finding a tool to assess children’s capacity in these areas.

A sample of 898 children was tested from the metropolitan area of Brisbane, Australia. Data were collected by using the following instruments: a survey questionnaire; a word picture test, the St Lucia Graded Word Reading [aloud] Test (GWRT), and the International Phonetic Alphabet (IPA) adapted to test phonemes.

The results of the research allowed a short version of the IPA test to be constructed which any teacher can use to discover if a child has problems in producing isolated phonemes in the classroom.

It was concluded in the statistical analysis of the data that there is a correlation between saying and reading words aloud and phonemic awareness in children from Pre-school to grade 8. This research has been conducted up to grade 8, as I found that there are significant reading difficulties not only in the earlier years but also from Grade 4 to Grade 8.

Two trial studies – (Test 1), a pilot test sample of 6 children; and (Test 2), a study of 84 children – were also tested where the same assessment instruments used for
the research were administered in a clinic for testing children and providing remedial programs in the same region. In these trial studies the children had the same background characteristics such as location, socio-economic level, language background, gender, and grade level, but they had been identified as having reading problems.

The final common pathway in all oral communication involves acquisition of phonemic knowledge and the capacity to articulate whole words; phonemes are the core of language as we speak with our ears. It is crucial for children to have the capacity to pronounce isolated phonemes and to have the capacity to read or say words aloud.

The contribution to knowledge by this thesis is the results of the children’s performance with regards to phonemic knowledge for the age range moving into adolescence, and the creation of a user-friendly diagnostic test for teachers to speed up the diagnostic process, given that it is well established that phonemic awareness is a prerequisite for learning to read and children who have auditory conceptualisation difficulties will be the ones who begin the long journey of first, second and third wave assessments and treatments, thus sending them on the pathway of failure and the Stanovich effect. Furthermore, my experience with working with children with learning difficulties has helped me design and conduct the testing with close to one thousand children.
Statement Of Originality

This work has not previously been submitted for a degree or diploma in any university. To the best of my knowledge and belief, the thesis contains no material previously published or written by another person except where due reference is made in the thesis itself.

__________________________
Patricia Anne Mongard Collette Tyrer
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A Special Note From Chile, An Inspiration

Patricia was born in Wales, from an English mother and a French, Chilean father. She lived in England and France but was taken to Chile at an early age. During this time she learnt English, French and Spanish. Leaving Chile as a dancer and teacher, she taught in Chile, Peru, Guatemala, England and Australia, where she became registered as a dance teacher with The Royal Academy of Dancing.

A change of profession came with the achievement of several degrees, BA Linguistics & Psychology, Grad Dip Education, Grad Dip Counselling, MA Applied Linguistics, and MA Counselling Social Science, leading Patricia to work with Professor John H. Tyrer who was a famous Physician, Neurologist and Linguist. They had a very successful clinic that specialised in children with learning difficulties. They designed programs, which were very helpful, seeing eight to ten children a day.

The training gained from Professor Tyrer was valuable experience for the research in this study. His knowledge of and insight into the problems of children’s learning difficulties were taught to Patricia through their work together.
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GLOSSARY OF LINGUISTIC TERMS

A

**Affix**: a morpheme, which can only be used when added to another morpheme (such as *un-* and -*ish* in *unselfish*).

**Alphabet**: a type of writing system in which a set of symbols (letters) represents the distinctive sounds of a language.

B

**Bilingual**: having the capacity to speak two languages.

C

**Capacity**: Capacity to perform or produce, the power or capacity to do something.

**Clitic**: a form, which resembles a word, but cannot stand on its own, being dependent on a neighbouring word. An example of a clitic is the ’*m* in ’*m*.

**Colloquial**: describes a variety of a language used in informal speaking situations.

**Consonant**: a speech sound made by a narrowing in the vocal tract so that airflow is blocked or restricted; the written symbol used to represent such a sound.

D

**Diacritic**: a mark, such as an accent, underline, or bar, which is added to a written symbol to indicate an alteration of how the symbol should be pronounced.

**Dialect**: a regionally or socially distinctive variety of a language, characterized by a particular set of words and grammatical structures. Any language with a reasonable number of speakers will develop dialects, especially if there are geographical barriers separating groups of speakers.
**Dyslexia:** Is a learning difficulty those with dyslexia have problems with some or all of the following: decoding words, blending letters, reading fluently, reading orally, and comprehending what they read. Dyslexia defined is a neurological, often genetic disorder, which interferes with processing language.

**Endangered language:** a language with less than 200 fluent speakers.

**Grammar:** (1) the system of structural relationships in a language: how words and part of words combine to form sentences. (2) A systematic description of a language. Comprehensive descriptions of the word structure and sentence structure of a language are known as *reference grammars*, while *teaching grammars* are descriptions designed specifically for teaching or learning a language.

**High (er) language:** a more formal variety of a language, sometimes only used in special situations, such as ceremonies.

**International Phonetic Alphabet (IPA):** the alphabet used by linguists to uniquely represent the sounds of the world's languages. A transcription of a word in the IPA can show every phonetic detail of how each sound is pronounced.

**Isolate, isolated language:** a language with little or no structural or historical relationship to any other languages. Isolates in B.C. include Ktunaxa, Nuxalk, and X̱aaydáa̱ Kil.

**Language:** the abstract system underlying the speech (and if applicable, writing system) of a community. It is usually said that people speak different languages if
they are not able to understand each other’s speech. There are over 34 distinct First Nations languages in British Columbia.

Language authority: an assembly, which represents a language or speech community. Some language authorities involve all communities within a First Nation. In other cases, where dialect differences are great, it is useful to have more than one language authority.

Language family: A group of languages, which historically developed from a common source or “parent language”. According to linguists, eight of the eleven major aboriginal language families of Canada are found in B.C.: Algonquian, Dene (Athapaskan), Salish, Tlingit, Tsimshianic, and Wakashan, plus the language isolates Ktunaxa and Xaaydaa Kil.

Groupings within a language family may be referred to as sub-families - such as Coast Salish and Interior Salish within the Salish family. A language can be described at various levels of classification within language families and sub-families. English can be classified as Anglo-Frisian, West Germanic, Germanic, or Indo-European. Similarly, SENĆOŦEN can be described as Northern Straits Salish, South-Central Salish, Coast Salish, or at the broadest level of classification, simply Salish.

Language isolate: see isolated language.

Language planning: a deliberate attempt to address the communication issues of a community by studying its languages and dialects and developing an official language policy.

Language revitalization strategy: a program of support and/or teaching designed to improve the use of an endangered or minority language.

Lexical item: a unit of vocabulary - a word or part of a word.

Lexicon: a complete inventory of the lexical items of a language; a dictionary.

Linguistics: the scientific study of language.
**Linguistic orthography:** a writing system based on the International Phonetic Alphabet (IPA). In British Columbia, linguistic orthographies generally use local forms of the Americanism variant of the IPA, containing symbols such as ʔ, xʷ, ƛ̓, and ʔ. A few BC languages, such as Nleʔkepmxčín and Hān̓q̓əmin̓əm̓, have adopted linguistic orthographies as their standard.

**M**

**Morpheme:** the smallest meaningful unit of language. A word (such as *self*) can be a morpheme, but a morpheme can also be a part of a word, which cannot stand on its own (such as *un-* and *-ish* in *unselfish*).

**Morphology:** the study or description of the structure or forms of words.

**N**

**Native speaker:** someone for whom a particular language is a first language, learned naturally during childhood.

**Neurology:** is a medical specialty dealing with disorders of the nervous system.

**O**

**Orthography:** a standardized system for writing a specific language – including both the symbols used to write the language, and the conventions for which symbol refers to which sound.

**P**

**Phoneme:** the minimal unit in the sound system of a language, which identifies a contrast in meaning. For example, in English, the sounds [p] and [b] are different phonemes because substituting one for the other changes the meaning of the word - e.g. *pin* to *bin*. Orthographies which show a close correspondence between letters and sounds – ideally, one distinct letter for each distinct sound - are described as **phonemic**. A phonemic transcription of a word shows only the details of
pronunciation, which are unpredictable based on the sound structure of the language.

**Pronounce:** to use the organs of speech to make a word or a speech sound, utter

**Plural:** a form of a word, which refers to more than one thing.

**Practical orthography:** an alphabet or syllabary developed for writing and teaching a language, often using symbols that are already familiar and accessible to language speakers. Practical orthographies for BC First Nations Languages generally try to use only those symbols found on an English typewriter keyboard, although a few extra letters or diacritics (such as accents, underlines, or bars) are often needed.

**Prefix:** a morpheme added to the beginning of a root word (such as *un-* in *unselfish*).

**Reduplication:** a process of repetition where the form of a prefix or suffix reflects some or all of the characteristics of the root word. For example, in Nisga’a, the singular form of the word for "blue" is gwisgwooskw and the plural form is *gwixgwisgwooskw*. Part of the root word is duplicated to form the prefix.

**Root:** the basic form of a word, which cannot be broken down. For example, *teach* is the root in the word *teacher*. Roots may also include “bound” forms, which are not complete words by themselves, such as *ceive* in *receive*, *deceive*, *conceive*, etc.

**Schwa or shwa:** a vowel sound heard, for example, at the beginnings of the English words *ago* and *amaze*. In BC First Nations orthographies, this sound may be represented with the International Phonetic Alphabet letter or by *e*, *u*, or other vowel symbols.

**Singular:** a form of a word, which refers to just one thing.
Sister languages: two or more languages, which derived historically from the same source. (See language family.)

Sleeping language: a language, which currently has no fluent speakers.

Standard: a prestigious variety of a language used within a speech community. A standard variety of a language cuts across regional differences and provides a unified means of communication and a norm, which can be used in writing and teaching the language.

Stress: the degree of force used in producing a syllable. A stressed syllable may be longer, louder, or higher pitched than nearby unstressed syllables. A stressed syllable may sometimes be marked with an accent, or followed by a single straight quote.

Syllabary: a writing system in which each symbol represents a syllable (usually a sequence of consonant + vowel) rather than a single sound. Syllabaries are used to write many Algonquian languages in central Canada, such as Nehiyawewin, or Plains Cree, and have also been used for Dene languages in British Columbia, Alberta, and the Yukon, such as Dakelh, Dene Tha, and Dane-zaa.

Suffix: a morpheme added to the end of a root word (such as -ish in unselfish).

Syntax: the rules governing the way words are combined to form sentences in a language.

Tone: the distinctive pitch level of a syllable. In many languages, including Halq’eméylem, the tone carried by a word is an essential indicator of the meaning of the word.

Trade language: a new language formed by two or more communities who can’t understand each other’s languages attempting to communicate.
**Transcription**: a method of writing down speech sounds in a systematic and consistent way.

**V**

**Vowel**: a speech sound made without complete closure or friction in the mouth, so that the air escapes easily over the centre of the tongue; the written symbol used to represent such a sound.

**W**

**Word**: a unit of expression, which is intuitively recognized as a unit by all native speakers of a language.

Crystal (2003)
Figure 1.1 The core of language Tyrer P. (2012)