# Incorporating Music in CALL: An exploratory study establishing a protocol for Computer Assisted Language Learning Incorporating Music (CALLiM)

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## Abstract

*Research in fields such as cognitive science, anthropology and sociolinguistics strongly support the importance of the music/language nexus, while in the language classroom, music is increasingly recognized as a valuable education tool. Interesting studies, such as Franzblau's computer-aided learning system employing a pitch tracking line, and Lenz's system for learning music using a computer game, have potential application to music in CALL. However, very few studies have addressed the combination of music, language and computers directly. This paper reports on a recent, Japan-based, exploratory study, which probes the affordances and constraints of incorporating music in a CALL environment, establishing a protocol for computer assisted language learning incorporating music (CALLiM). Approaches used previously without a computer are applied to CALL, to help discover the key functionalities and sustainable approaches that assist in learning a language through music in a digital age. Reflective practice, auditor intervention and diary work inform data collection and analysis. The study reveals a number of interesting contradictions that arise when moving from a pre-CALL to CALL environment. It also sheds light on issues that impact on searching and sampling, vocabulary learning strategies, and developing comprehension skills and cultural competence when incorporating musical strategies. With Ilocano song lyric texts as a point of departure, the importance of employing varied rhythmic drills and featuring music as a component of rich input (RI) is also highlighted by the study.*

***Keywords****: CALL, music, reflective practice, self-directed learning, Ilocano.*

## Introduction

Music, language learning and computers combine in an exploratory nexus at the Centre for Language Research (CLR) at the University of Aizu, in Fukushima, Japan. Part of an institution that specializes in computer science and engineering, over the past two decades, the CLR has produced a steady stream of CALL related research (Brine & Franken, 2006, p. 7; Brine, Wilson, & Roy, 2007; Lambacher, 1999; Warschauer, 1995, 1996, 1997). This stimulating environment has prompted the exploration of CALL from my own perspective as both a language learner and a musician, and motivated recent research into the way teachers are incorporating music in the language classroom (K. Rockell & Ocampo, 2014).

Much of my personal experience of language learning tended towards self-directed learning (SDL) and what Schön referred to as "deviant traditions of education"(Schön, 1987). These earlier attempts did not involve computers, but relied on a rather bulky array of language learning materials. Reflection on this pre-CALL period, motivated curiosity about how the language learning techniques practiced without the computer might be re-applied to CALL, incorporating music and as an autonomous, self-directed learner.

In choosing a focus language for this project, Ilocano, I was guided by previous work on the preservation of cultural heritage within the migrant Filipino community (K. Rockell, 2012, 2013; K. F. Rockell, 2009, 2012). These studies revealed the importance of language retention in migrant communities in which CALL may play an increasingly important role. The goal in this research was to discover the key functionalities of

the computer that can be made use of to teach oneself Ilocano incorporating music, helping to establish a protocol for computer assisted language learning incorporating music (CALLiM). Rather than allowing the power of the technology to take preference, the aim was to see if the procedures used previously in the pre-CALL environment could work with technology, and in what way they might be modified, improved or even hindered in the process. Asking, "What are the fundamental things, not embodied in the technology, which outlive changing technologies?" It was also the author's hope that that the careful documentation of a self-study might make an interesting, idiographic contribution and offer additional insights into what is known about autodidactic, adult language learning.

## Methodology

In documenting this project, a combination of diary and journal writing was used. Supported by several authors (Bolger, Davis, & Rafaeli, 2003, p. 13; Matsumoto, 1996; Rieman, 1993; Zimmerman, 2008), diary research provides "a powerful set of methods for studying various human phenomena" and offers "a unique window on human phenomenology"(Bolger et al., 2003, pp. 580, 610). Diaries are listed along with computer traces, think-aloud protocols, direct observation and microanalyses as online measures that provide "valuable new information regarding the casual impact of SRL [Self Regulated Learning] processes" (Zimmerman, 2008, p. 166). Diary work in language research has been strongly supported by researchers in Japan (Matsumoto, 1996; Wojtowicz, 2014), where Matsumoto believes that diary keeping is best combined with questionnaires and interviews as "as means of optimal self-reflection in the learning process" (Matsumoto, 1996, p. 147). The terms "diary" and "journal" overlap. "Diary" tends to indicate the regular recording of times, duration, frequency and basic details of study activities, while "journal" implies the writing up of wider ranging and more detailed observations. In this study, diary/journal entries following a three-part model of reflective practice, and retrospective coding (see appendix 1) were used. The research was also monitored at regular intervals through a series of independent Auditor Interventions.

The idea of "reflective practice" and the importance of reflecting on ongoing experience has long since been established by Schön (Schön, 1987). Journal writing, being "both the place where the events and experiences are recorded and the forum by which they are processed and re-formed", is an ideal support for such a practice (Boud, 2001, pp. 10-11). The microanalyses of these processes has frequently been applied the investigation of athletic skills, but it may also be very useful to apply to the language learning (Zimmerman, 2008, p. 179). A basic framework of this "cyclical model of self-regulated learning involving three sequential phases: preaction, action and post action" is presented below (Zimmerman, 2008, pp. 173, 178):

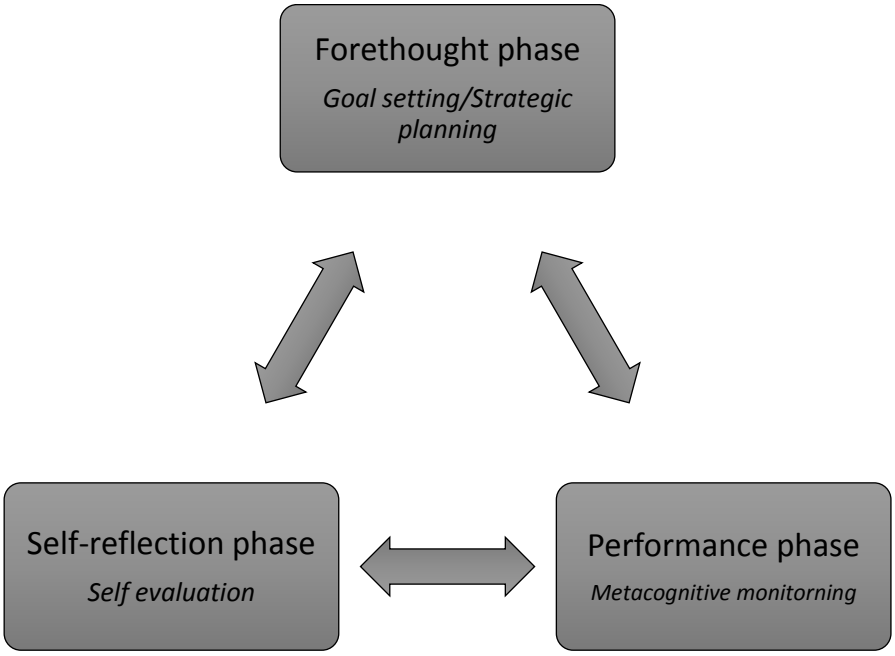



**Figure 1 Cyclic model of self-regulated learning**

Applying this idea to journal writing, typical processes associated with each phase are listed below (Boud, 2001, pp. 12-13):

1. In anticipation of events (reflecting of intents, goals, expectations and what we want from the activity)
2. During events (noticing, intervening and reflection in action)
3. Afterward (return to experience, attending to feelings and re-evaluation of experience)

During the afterward-phase, the role of feelings and emotions in decision-making can be emphasized, and it is "not simply a process of thinking" (Boud, 2001, p. 13).

**Music/Songs**

The importance of the music/language nexus is "substantiated by research in the fields of cognitive science, anthropology, sociolinguistics, psycholinguistics, First Language Acquisition (FLA) and Second Language Acquisition (SLA)" (Engh, 2013, p. 113). In the language classroom, many increasingly share the view of music as a "proven teaching tool" (Setia et al., 2012, p. 271), which has the potential to really "helps students succeed as EFL students" (Jalongo & Bromley, 1984).

Songs, in particular, being texturally based, are a natural starting point. However, although songs are currently used by teachers world-wide (Murphey, 1992), it is pertinent to ask what intrinsic qualities songs posses that pertain to language learning.[1] To highlight these for the purposes of this study I define as song as:

*An affectively enriched text with enhanced prosody and rhythmic emphasis, built-in repetition and embedded cultural information.*

[1] To merely suggest that songs are beneficial is not enough. After all, almost any object, model, text, map, sonic data or musical texture may be of potential benefit, depending on the way the materials are used in language learning.

Affectively enriched texts can evoke a variety of emotional responses including laughter, and have an aesthetic dimension, rendering them more attractive and capable of capturing our attention (Butto, Holsworth, Morikawa, Wakabayashi, & Edelmen, 2014). By "harnessing music's affective power" (K. Rockell & Ocampo, 2014, p. 38), these elements positively influence learners' attitudes, motivation and confidence (Setia et al., 2012, p. 270). They makes learning more lively (Campbell, Campbell, & Dickinson, 1996) and create a learning environment which is more exciting and at the same time more "relaxed and conducive" to studying language (Setia et al., 2012, p. 274).

Enhanced prosody and rhythmic emphasis draw our attention to features of intonation and stress in spoken language (Davanellos, 1999) . This, in turn, assists students in improving pronunciation (Setia et al., 2012, p. 273).

Repetition is found frequently in strophic song texts with chorus, verse alternation. Repetition provides a natural opportunity to practice units of language and aids in the automatization of colloquial language (Setia et al., 2012, p. 274). It also promotes recall as a result of intensified input (Murphey, 1992). Working with song has a positive effect on recall because it helps to lodge language in the short and long-term memory has been described as an "easy way to remember quite long chunks of a language" (Campbell et al., 1996; Salcedo, 2010, pp. 23,27; Setia et al., 2012, p. 271).

Frequently too, songs contain embedded information about the cultural environment and circumstances in which they came into being, making them a "potentially culturally rich resource for the language classroom" (Engh, 2013, p. 115) and base for cultural knowledge activities (Kristen Lems, 2001).

Of course, like any other text, song lyrics contain individual vocabulary items and examples of grammatical structures, which could be examined on their own and without recourse to musical strategies (Murphey, 1992, p. 271; Setia et al., 2012).

Songs are authentic or natural language materials (Setia et al., 2012, p. 274) and, when carefully selected, can enhance interest, recall, pronunciation and cultural understanding, as described above. Recognizing these benefits, the two Ilocano song texts were incorporated during the current project.

**Ilocano**

Ilocano is an Austronesian language with its homeland in Northwest Luzon, Philippines. With approximately nine million speakers, it is the Philippine language with the third largest number of native speakers after Cebuano and Tagalog (Rubino, 1998, pp. 7-8). The Philippines archipelago exhibits "remarkable linguistic diversity"(Rubino, 1998, p. 8). Out of a total of 101 languages spoken throughout the country, Ilocano appears amongst a list of 14 languages spoken by at least one percent of the total household population (Roxas & Borra, 2000, p. 1).

As mentioned earlier, this projected followed on from earlier ethnomusicological fieldwork into Philippine music when Ilocano was encountered through the song title, "*Manang Biday"*, in an instrumental arrangement performed by Filipino migrants to Australia. There, it appeared as part of a core repertoire of Filipino folk and popular songs and folkdances, and as representative of the instrumentalists' identity as "Filipinos and as migrants in the broader Australian society" (K. F. Rockell, 2012, p. 376). While most songs appeared to have Tagalog titles, the appearance of titles in other languages such as Bicol, Hiligaynon, Ilocano and Cebuano which represented the "diversity of Philippine ethnic and linguistic groups" (K. F. Rockell, 2012, p. 394).

"*Manang Biday*" is an Ilocano folk song from the northern Philippines, which tells of a man serenading an older woman. Not long into the project, during E-field work, the researcher came across "*Laglagipen*", a song associated with the performer Lea Dansalan, and this too became a textural vehicle with which to explore CALLiM.[2]

[2] Current work on Ilocano is also a useful preparation for a planned future investigation of mutual intelligibility between the Yami or Tao language of Orchid Island, Taiwan and other northern Philippine languages such as

## Computer Assisted Language Learning Incorporating Music (CALLiM)

Almost two decades have passed since Levy's attempt to "define a framework for the description and analysis of CALL research in terms of identifying the goals of CALL researchers and clarifying the unique features and problems of CALL research" (Stockwell, 2007, p. 106). At that time, an interdisciplinary tendency in much CALL-related academic literature, was noted, highlighting the "multitude of approaches" that the field seemed to invite (Levy, 1997, pp. 1,2).

Today, however, despite their extraordinary potential, "the development of high-tech study environments is yet in its infancy" (Zimmerman, 2008, pp. 171-172).

A number of works amongst the 623 items listed in the extensive references of Levy's *Computer-Assisted Language Learning* deal with video, multimedia and hypermedia, but not one of these specifically addresses music or song in CALL (Levy, 1997).

Since then, some studies linking computers, music and language learning have been conducted, but overall the area appears to have received scant attention.

Interesting developments such as Franzblau's computer-aided learning system employing a pitch tracking line, which helps to control the pitch and rhythm of a singer's voice (Franzblau, 2007), and Lenz's system for learning music using a computer game (Lenz, 2011) have potential application, but are not aimed specifically at language learners.

Examples of the few studies that do address music, language and computers include Pinkard's examination of the use of childhood songs as literary scaffolds in computer-based learning environments (Pinkard, 2001). More recently, Lems has referred to the use of music-related topics in computer assignments (Kristin Lems, 2005), and work in computational linguistics has examined learning word meanings and descriptive parameter spaces from music (Whitman, Roy, & Vercoe, 2003). A Taiwanese Web-based study of the influence of song repetition, likeability and understandability on EFL learner outcomes (Beasley & Chuang, 2008) is also of interest.

Conscious of the concern that the CALL literature "abounds with one-off projects" (Levy, 1997, p. vii), it is the author's wish that CALLiM be both seen within a broader CALL context, and recognized as a new and growing area in its own right, to which this paper makes a small contribution.

To facilitate a comparison between the pre-CALL and CALL workstation environments, the following section sets out to make explicit a range of language learning techniques previously employed without the computer.

## Retrospective Diary Archive: The Pre-CALL Language Learning Station Circa 2000

Growing up in New Zealand, in the 1980s, I observed SDL efforts using endless-loop tapes, shortwave radio and cassette players. Language learners lamented the seeming difficulty of learning a language outside the country where it is normally spoken, and envisaged a special immersion lab into which one could retreat for lengthy periods of linguistic development. A decade later, during the late 1990s while working at the Central Queensland Conservatorium of Music (and prior to owning my first computer), I assembled my first language study environment. Although it is claimed that foreign languages can be learned successfully with "no technology support at all" (Doughty & Long, 2003, p. 38), historical technologies such as handwriting, printing or memorization strategies have long been considered integral to the study of languages. The pre-CALL environment did rely on these, and other technologies, but did not directly involve the use of a computer.

Ilocano. Conversations between the author and a combined Taiwanese aboriginal folk dance group with members from several different tribes in Hualian, 2007, touched on the topic of mutual intelligibility between Philippine and Taiwanese languages.

Two main principles guided study using this pre-CALL language learning station. Firstly, the idea of rich input (RI) combining comprehensible and "real world" language was important. The benefits of linguistically rich input in language learning is supported in the literature (Doughty & Long, 2003, pp. 47-53, 57). Language input, which is "not just a matter of linguistic complexity, but of quality, quantity, variety, genuineness, and relevance", has been recognized as important for adult foreign language learners. Several audio sources blending spoken language and/or music were present simultaneously during the majority of time spend studying at the pre-CALL workstation. Sourcing such materials brought in to play Liam's three basic principles of Awareness, Autonomy and Achievement or "the 3 As" (AP Lian, 1987; Andrew Lian, 2000).

Secondly, the idea combining, uniting or simultaneously exercising the four processes with deliberate intensity was considered important. Language presented via text and audio sources was spoken aloud energetically and written at the same time. The pace of speaking and writing were frequently different, so several looped repetitions of a particular utterance would be spoken, while the same language was written, one word at a time, at a slower rate. During this process, spoken language, and music or song, continually informed the ear, both consciously and unconsciously from the various audio sources.

Music, specifically, was incorporated into this pre-CALL environment in two main ways:

1. As a component of RI, as described above.
2. As looped, sung, formulaic sequences or lexical chunks (Schmit, 2000; Wray, 2000), practiced repetitively to the accompaniment of a simple musical instrument (keyboard, guitar, ukulele or percussion).

The pre-CALL study environment or workstation was established on the balcony of a freestanding, two-story house in Central Queensland, Australia. It combined the following items:

a) Short-wave radio
b) Punch-play back cassette player
c) CD Cassette player
d) Mirror
e) Electronic Psittaciformes [parrot](records and loops short voice samples)
f) Pad paper/pen
g) Magnifying glass
h) Text books, dictionaries and other literature
i) Pictures or realia related to the culture of the language being studied
j) Musical instrument (an auxiliary item and not included in the desk arrangement)

The above items were arranged on a large table as indicated below:

**Table 1 Desk Layout of pre-CALL, Self-Regulated Language Learning Lab**

| | | | |
|---|---|---|---|
| e) Electronic Psittaciformes | d) Mirror | a) Short-wave radio | c) CD radio cassette player |
| | g) Magnifying glass | | |
| i) Pictures or realia (currency, figurines etc.) | f) Pad paper/pen[3] | b) Punch-play back cassette player | h) Text books, flash cards, dictionaries and other literature |

**Function of the individual items**

a) Short-wave radio

The short-wave radio provided access to news broadcasts and music in the language(s) being studied. Reception quality was variable and limited to fixed time slots, but these broadcasts provided a sense of authentic connection to the location and cultural context in where and in which the language was spoken.

b) Punch-play back cassette player.

This type of cassette player made it easier to frequently rewind and replay short segments of taped material. It was mainly used to play dialogues and key phrases that formed part of commercial language learning course work as well as private records made for my own study purposes (personal interviews with native speakers, tailor-made pronunciation guides, etc.). This was a durable machine and pressing the "spring-action" buttons provided an energizing, tactile experience.

c) CD radio cassette player

The radio cassette player was primarily used for playing songs and music, and occasionally longer spoken language recordings that did not require frequent pausing. The music was used primarily for mood enhancement and as "a cognitive break" between periods of study (K. Rockell & Ocampo, 2014, p. 39). Musical content was continually played at a lower volume throughout periods of study to create RI.

d) Mirror

The mirror was used to observe facial movements and behaviour of lips and tongue while speaking. It was kept near the back of the workstation table so that it could be rested against the wall. For close-up observations the mirror was picked-up and held manually near the speaker's face.

[3] The pad paper was positioned to the left of the study area because the author is left-handed.

e) Electronic psittaciformes
This device was a kind of simple looping technology that played back repeatedly the words or short phrases spoken to it. The brightly coloured, battery-powered, electronic psittaciformes [parrot] had a lively visual appeal, which helped to ease the intensity of serious, sustained study.

f) Pad paper
Low-grade pad paper was available cheaply at discount retail outlets in Queensland in the late 1990s. In keeping an overall approach to study that sought to exercise the four processes simultaneously and intensively, a great deal of paper was used writing out the target words and phrases as they were heard and/or spoken. Writing by hand provided a spatial experience while forming individual letters and/or Chinese characters.

g) Magnifying glass
Many of the entries in language dictionaries (particularly Chinese and Japanese ideographs) were too small for the author to see clearly. The magnifying glass made it possible to view multiple and complex stroke patterns in unfamiliar characters more easily.

h) Text books, flash cards, dictionaries and other literature
These items included a large stack of regularly used texts. Books relating to the language under consideration at a particular time were placed at the top of the stack. Flash cards of various sizes made of cardboard and paper were also stored at the top of this stack of items.

i) Pictures or realia
Forming a kind of "visual culture capsule", coins or note currency, photographs and other types of illustrations or small ornaments or figurines representing the area where the target language was spoken, helped to provide inspiration during long hours of study.

j) Musical instruments (not included in table 1)
Musical instruments, used to accompany looped lexical chunks, were stored in various locations, separate from the pre-CALL workstation. They also sometimes aided the learning of song texts in the target language.

**Commencing E-Field Work: Diary/Journal DATA**
Exploratory research and data collection for CALLiM took place between 5th November 2013 and 23rd January 2014, at the University of Aizu Centre for Language Research. One Mac OSX version 10.6.8, and a DELL SP2309Wc 23" flat screen monitor were used throughout the project.[4] A qualitative evaluation of diary/journal entries was prioritized, and entries were made mindful of the cyclic model of self-regulated learning described earlier. As will be noted, regular habits and routines began to form during the project, but as much as possible, an exploratory focus was maintained. An example page from the research diary appears as table 2 below. Codes for searching and sampling (SS), vocabulary learning strategy (VLS), auditor intervention (AI) and difficulties or constraints (P) are highlighted in this diary example and, as mentioned earlier, a more detailed list of codes appears as appendix 1. Following this example, the general findings that emerged from the research process are described.

[4] On several occasions an additional laptop was used simultaneously in an attempt to expand monitor space, but for the main part of the project only one machine was used.

**Table 2 CALLiM Diary/Journal**

**CALLiM Diary/Journal 5th November 2013– 23rd January 2014**

| Forethought phase<br>*Plan* | Performance phase<br>Action*/Observation* | Self-reflection phase<br>*Self-evaluation* |
|---|---|---|
| | DATE: 2013-11-05 | |
| TIME 6:25 p.m.<br>**Watched** "The new eco system of open knowledge flows" TED talk by Sanjay Pradhan URL1<br>TIME 6.27 p.m.<br>AI Auditor enters room and discusses Schön and also individual obsessive attachment to particular musical genres | | |
| | DATE: 2013-11-06 | |
| TIME 11.22 a.m.<br>Begin by **searching** for and **listening** to the target song using the Internet | SS **Search** for "*Manang Biday"* clip on YouTube. Found URL2<br>Notice lyrics appear but no voice track, notice Spanish loan words | Although I have decided to use a certain song text, there are many more Ilocano songs accessible on the Internet and many of these might be more appealing. There do seem to be quite a number of Spanish loan words in this song text. I wonder what other words appear frequently. |
| Decide to **list** Spanish loan words | VLS<br>• **List**: *bintana, jandin(ko), enkanto* (appears twice), *Laguna, manga, frutas, tanto*<br>• **Read** this list aloud<br>• **Listen** again to clip and observe the listed words<br>SS<br>• **Searched** and came across a medley of Ilocano songs that seemed more appealing that *"Manang Biday"* | |
| TIME 3:15 p.m.<br>VLS **Look for** high-frequency words | **Look for** high-frequency words<br>*Notice that "ta" appears 5 times* | It may be enough at this stage just to observe but I want to know what these words mean |
| VLS **Search** for an online Ilocano dictionary and **look up** the high-frequency words | • Found: URL3 online dictionary<br>P "*Ta" does not appear as a simple entry in the online dictionary* | It is curious that a high frequency word does not appear. Perhaps it is a particular form of another root word. Lack sufficient understanding of the grammatical system to guess root. Perhaps I should read about Ilocano grammar |

## General Findings

In this section, general diary/journal findings are presented, beginning with searching and sampling and then addressing general language learning strategies and those incorporating music. Following this, vocabulary, grammar, comprehension, culture, the communicative dimension and motivation are discussed.

## Searching and Sampling for Resources

At the outset, a search for material on the Internet revealed the very wide range of potentially applicable open source multi-media. Clips, such as Sanjay Pradhan's TED talk on "The new eco system of open knowledge flows", affirm the value of online learning and inspired action. It also became clear that much Ilocano-related material is accessible online. Searching is an intrinsically enjoyable activity, and the desire for more and varied material motivates increasingly extended online searches. The issue then becomes how to adequately sample and assess appropriate material for study, in a way that is not inordinately time-consuming. Of course, individual learners do not come to this knowledge pool with a totally unbiased outlook. In the case of music, some individuals have strong attachments to particular musical genres, and find certain songs more appealing than others, which, in turn, may influence the way they access and appraise the range of materials available. It may be a helpful strategy to identify typical topics and content areas during the first phase of searching and direct attention there. In the case of Ilocano, for example, religious material and romantic songs appeared prominently.

Online resources also need to be organized and edited. Some multimedia available on line is of poor, or very amateurish quality, despite containing interesting and relevant content and this may exclude them as appropriate material for study. At a certain point, there is a need to organize online recourses into a workable "kit". This can be done using Bookmarks, favourites, or creating a file or folder with contains groups of files and commonly accessed URLs. Such a kit takes up a lot less space that the set of pre-CALL tools. A huge amount of material can be organized into sets for use as RI. Despite the possibility of building up even richer environments, the most effective combination during this project appeared to be two spoken tracks and one music track simultaneously. This was the same as what was used in the pre-CALL language-learning environment. Music was used as an integral component of almost all RI sets throughout the project and its absence was felt when not included.

A significant problem during searching, which is explained more later on, was the difficulty finding an online Ilocano-English dictionary that could meet the requirements of CALLiM. In the absence of such a dictionary, communication platforms, such and the *Interactive Dictionary* proposed by Lian as "a shell which enables individuals who are in the process of investigating various concepts and issues to create their own entries," could prove useful (Ania Lian, 2006, p. 187).

## Language Learning Strategies

With searching as a point of departure, practice styles evolved as research moved forward and, as the project developed, the need to consolidate materials grew. After 2 months, a regular routine had evolved, usually combined with RI. Approaches used frequently included:

- Song lyric activities
- Vocabulary drills/practice
- Dictionary input (compiling the Ilocano to English word list)
- Visually focussed activities

RI was used consistently during the research period.[5] This approach takes advantage of the possibility for overlaying multiple tracks to create a soundscape that approximates what one might experience in the target language location. Within this, music and conversations can be backgrounded and foregrounded in a variety of ways. In working with multiple tracks, the combinatorial possibilities are unlimited; with white noise at the extreme end of an increasingly intricate continuum. As already mentioned, the standard RI in this project was one or two spoken tracks and one musical track played simultaneously, plus or more static visual images related to Ilocano life and culture. For the latter, multiple monitors can enhance visual impact.

Vocabulary practice approaches (usually combined with RI) included:

- Working from an experimental, fixed vocabulary set
- Using a Logitech camera
- Using an online metronome
- Doing patterned alternation practice with gestures or gesture dances
- Using the personal acoustic muffler (PAMM), (described in a subsequent section)

Visually focussed approaches can also be combined with RI and with a computer it is also relatively simple to combine text and images. During this project, for example, a Google images picture of a group of players on a sports field was used for practicing pointing to individuals and groups of players and asking: Q: *Siak*? [Me?] A: *Saán*? [No] or Q: *Isúda*? [They] A: *Wen* [Yes]. Another possible approach is to use speech bubbles and dialogs added to simple pictures or open source digital comic strip creation software.

The language learning strategies that tended to incorporate music were:

1. Song lyrics activities.
2. Rhythmic vocabulary drills.

Studies of music and language recognize the importance of song as a "combination of music and language"(Mithen, 2005, pp. 273-274). The first Ilocano song, "*Manang Biday"* was easily accessible via an Internet search. The second, *"Laglagipem"*, reminiscent of Mexican ballads, was found during CALLiM searching and sampling. Examples of the first verse of each of these songs appear as appendices 2 and 3. Song lyrics and guitar chords for Filipino songs are numerous on the Internet, but English translations of these songs less so. Perhaps Filipinos, who are frequently very comfortable using English, do not feel the need for such translations.
Lyric-focused activities in CALLiM tended to draw upon participatory-focussed, listening-focused, combined-focus and literary-focused approaches.

[5] Only on one occasion did the constant use of RI become irritating but I forced myself to listen to in nonetheless. Previously, during a two-year stay in Hokkaido, Japan I experienced this kind of irritation after one year, and felt the urge to retreat from contact with Japanese speakers. This turned out to be period of strong linguistic development, engendering a belief in the importance of "breaking through the pain barrier".

**Three Different Emphasis in Lyric-Focussed CALLiM**

| **1. Participatory** | **2. Listening-Focussed** | **3. Combined Foci** |
|---|---|---|
| Speaking | Background listening while working on other language learning tasks. | Listening to song (e.g. "*Manang Biday"* while following along with (silently reading) the lyrics. |
| Humming | Focussing on sound groupings and patterns. | Listening to the song and typing out lyrics manually into a word document (then listening again to check for accuracy). |
| Lightly singing with personal acoustic manual muffler (PAMM). | Listening for monosyllabic words like *ka* and *ko.* | |
| Segmental practice using YouTube repeater. | Focussing on the title or title's meaning.<br>Listening to song and learning it in sections using YouTube Repeater. | |

**Figure 2 Lyric-Focussed Approach to CALLiM**

Literary-focussed approaches included:

- Alternating reading grammar texts and observing the lyrics as they appear in the karaoke version of a song (Here the text is the focus and the musical elements are purely decorative).
- Scanning song text for high frequency words or loan words (or other specific types of language such as personal pro-nouns).
- Choosing a group of five words from the song text and focussing on them specifically.
- Using an English translation of the song text as a "key in" or aid to understanding.

As mentioned earlier, the use of music in language learning as a fundamental practice has been established, and evidence shows that working with songs can aid memory and retention. During the current research, however, doubts arose as to whether or not song lyrics by themselves can be a self-sufficient textural resource. One problem is that the kind of vocabulary found in song lyrics is very different from that used in areas such as technical communication, for example, and this limits their broader application.

Also, as the desire to use Ilocano communicatively increased during the course of research, the concern began to arise that song texts are not "communicative" (if we include in this definition an exchange of information), and do not often present semantically related question/answer couplets between speakers. Only certain texts with embedded question/answer sequence could form the basis for such interaction. [6]

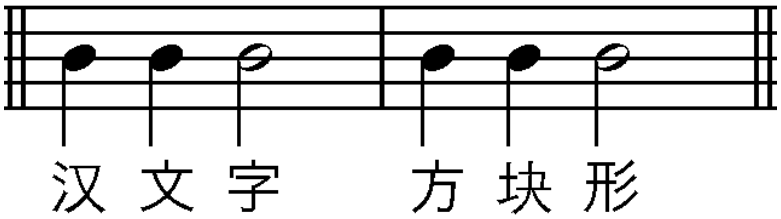
The original intention for CALLiM research set out to focus primarily on song lyrics has been clearly stated. It was the case, however, that rhythmic drill and dance activities emerged as increasingly important areas, and began to eclipse the lyric focus. Challenging my own pre-conceived notion that a computer or machine-based approach would be physically restrictive and immobilizing, it was revealed that, on the contrary, the digital environment offers great potential for freeing the body, making dance and a range of other Computer Assisted TPR (CATPR) activities more possible. This supported, in part, by the ability of the computer to

[6] One example is the American colonial song that asks: "Soldier, soldier will you marry me with your musket pipe and drum?" and in the same verse answers: " Oh no sweet maid, I cannot marry you for I have not shirt to put on."

display text on the monitor. Dance can be explored and expanded in various directions, such as vocabulary drills done standing still using complex hand-gesture only, various stretches, body-loosening movements and even free dancing. All these are made possible as a result of the power of the computer to free the body. There is much potential to explore vocabulary drills with dance and variations of CATPR.[7] In fact, dance became so engaging during the project that at one point the focus on the song lyrics was completely lost.

Over the three-month period of exploratory research, rhythmical, repetitive vocabulary practice was done with increasing frequency. A question also arose, and warrants future investigation, as to whether there is a particular rhythm that is most effect when learning language. Chinese 3-character poems, such as the Confucian classic, *San Zi Jing* [三字经] for example, are read with a quick-quick-slow/quarter note-quarter note-half note rhythmic pattern. A typical 3-character poem opening illustrates this point, as seen below:

**Table 3 Chinese 3 Character Poem Rhythmic Pattern**




[7] Unfortunately, overly enthusiastic practice can lead to injury. An overly energetic session of vocabulary practice on Christmas day resulted in distressing lower back pain.

Combinations of patterned repetitions with gestures and other body movements are very dance-like. This choreographic feeling was enhanced during activities, such as rhythmic patterned repetitions with finger clicks and hand gestures. One approach trialled during CALLiM was "double handed", with one hand providing basic information and other hand enhancing the meaning. For example, "sprinkle gestures" or a single finger point were used as indicators of singular or plural personal pronouns.

**Figure 3 Plural personal pronouns indicated by double-handed sprinkle gesture**

An online metronome provided rhythmic support for this quasi-dance style and one can strive to make the steps coincide with accented syllables in words or phrases.[8] At the same time, experimenting with different rhythmic possibilities or patterns makes practice much more interesting. Examples include: on beat, off beat, doubled, and two off beats in triple-metre coming after the metronome beat, as shown below with the Ilocano plural, proximal demonstrative *dagitóy*.

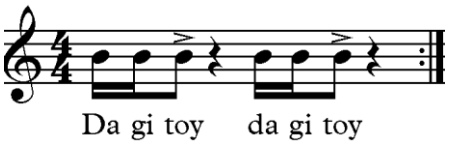



**Figure 4 On beat**

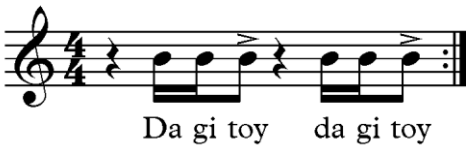



**Figure 5 Off beat**

[8] Interestingly, using the online metronome simultaneous with RI (at a different tempo) was not experienced as off-putting, despite the rhythmic incongruence.

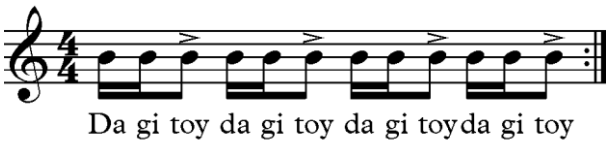



**Figure 6 Doubled**

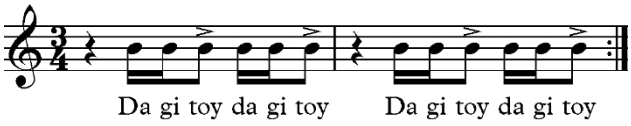



**Figure 7 Two off beats in triple time**

Musical activity is constrained by a number of factors, including degree of privacy and sound proofing conditions. Singing or speaking out loud may disturb neighbours, and this was certainly a problem during CALLiM where sound was easily heard in the neighbouring office through the rather thin walls.[9] A potential solution aimed primarily at wailing infants was proposed by Boynton (Boynton, 1988). Research into vocal muffling continues (Almagro, 2012; Chapman, 1990), and portable vocal booths for private practice are now available, although they are prohibitively expensive. Lacking adequate technical resources, one rudimentary solution is to use a Personal Acoustic Manual Muffler (PAMM) although it is doubtful how effective these methods are. In the pre-CALL environment, PAMM was not mandatory due to the relatively freer Australian sound environment (K. F. Rockell, 2012, p. 313). A propensity for silence, and tendency towards situation-specific behaviour in Japan (Fujio, 2004; Harumi, 2010; Hasegawa & Gudykunst, 1998; Jones, 2008; Nakane, 2006), however, mandate the use of such techniques, and make vocal booths a necessity for CALLiM practitioners in Japan.

## Vocabulary Learning Strategies

Working with song lyrics, a variety of ways for dealing with vocabulary arose during research. Specific groups of words, such as loan words from Spanish or apparently high-frequency words appeared prominent and could be grouped together for study. Many Spanish loan words appear in the song "*Manang Biday"* but less so in "*Laglagipem"*. Approaches to vocabulary learning included:

- Reading aloud and observing high frequency words.
- Repetition (energetic, viscerally reinforced repetition).
- Review.
- Making an arbitrary choice of 5 words from the song text to focus on.
- Creating vocabulary sets and put them in file for ready access.
- Intensifying meaning with gestures.
- Clarifying meaning by alternating relative pairs such as me/you, here/there etc.
- Internally imagining the "meaning" (visual or other sense associations) of a term.
- Exploring the "boundaries" of a word by entering it, de-contextualized from the song lyrics, into a search engine and viewing a selection of results.
- Looking for similarities with Tagalog (e.g. *diak=di ako*)[10]
- Searching for closely related or similar words such as *manong*/*manang*

[9] When I became more familiar with "*Laglagipem"*, the urge to sing along with it was strong, but since the neighbouring office had complained about hearing guitar practice I felt inhibited to sing out loud.
[10] Familiarity with Tagalog proved helpful as some Ilocano words and phrases are similar and this provided some clue to meaning.

The search for vocabulary in online dictionaries, frequently unsuccessful, was problematic and caused considerable frustration. Certain Ilocano verb forms, which appeared in song lyrics, were difficult and sometimes impossible to find in online dictionaries. Verbs in Philippine languages are agglutinative and these conjugated forms, which might appear in a song, are not always immediately accessible in dictionaries. Lack of sufficient knowledge of Ilocano grammar makes it difficult to identify the root form and, even when this is identified, the root word alone does not always appear. Even words that appeared prominently or frequently in lyrics were often not listed in dictionaries.

Having reference to an English translation of the song lyrics, to provide a key into the meaning of some of the words, seemed a possible avenue. As mentioned earlier, however, Filipino song lyrics with guitar-accompaniment chords are readily available online, but English translations are rarely provided. A possible explanation for this is that because many Filipinos are fluent in English they do not require a translation for their own personal use. In answer to this need, an Ilocano textbook with a built-in dictionary was ordered for use in CALLiM (Rubino, 1998). In this textbook, however, words were only listed from English term to Ilocano equivalent and not the reverse. It took a great deal of time to reorganize the Ilocano definitions into an alphabetical list of terms with English equivalents, to permit ready access.

The act of searching for the meaning of terms in itself, however, even if it does not yield a concrete result, had some positive benefits as a vocabulary learning strategy. Searching seems to result in "ingraining" aspects of the word (sound and written from) despite the lack of semantic understanding. Less positively, however, in this project, searching for the meaning of terms took up a disproportionately large amount of time.

Vocabulary learning sometimes occurred spontaneously, as in the case of the word *agbabawi* [repent], which appeared several times in a religious debate used as part of RI. From the context and English code switching used in the program the meaning became self-evident. On another occasion, noticing the word *ngarud* appearing several times (this word can also be seen in the lyrics of "*Laglagipem"*) provided a strong motivation to discover its equivalent meaning in English. This illustrates how RI can work without the learner requiring a specific linguistic focus. Ensuring that there is sufficiently broad input is enough.

**Aspects of Grammar**

During study with RI, inductive grammar understandings began to form. For example, it became apparent that the meaning of *ití* is similar to *ng* in Tagalog, a realization facilitated by pre-knowledge of another Philippine language. Early in the project, however, the need for more information about Ilocano grammar was felt. As mentioned earlier, insufficient knowledge of Ilocano grammar, in particular agglutinative verb formation, makes dictionary searches problematic. Online searches led to sites offering information about Ilocano particles, and other features of grammar.

Employing musical strategies, certain grammatical concepts, such as the inclusive and exclusive personal pronouns (*dakamí*/*datayó*) found in Ilocano and other Philippine languages, can be well expressed in dance with enclosing, limiting or inclusive gestures as shown below:

**Figure 8 Dance gesture for excusive second person plural Ilocano pronoun *dakamí***

**Figure 8 Dance gesture for inclusive second person plural Ilocano pronoun *datayó***

## Developing Comprehension Skills

When directly approaching advanced materials, such as song lyrics, in the early stages, and observing uncomprehendingly, working from the initial assumption that observing/listening was enough, the inner imperative for clear semantic insight became very strong. Real discomfort, and a strong urge to "know" and "understand" the lyrics of "*Manang Biday"* was experienced.

After six weeks of regular practice, however, which involved regular work constructing a word list (Ilocano to English dictionary) while listening to a set of rich input (RI) materials, understandings of now familiar words such as *daytóy* [this], *kabsát* [brother/sister], in a similar way to inductive grammar understandings, began to form naturally. Meaning making in this way is "a dynamic process rather than a static process which relates to the simultaneous management of both known and unknown, perhaps even unknowable, variables" (Andrew Lian, 2000). Sounds in Ilocano that are very different from those heard in Cebuano and Tagalog also began to be recognized.

The numerous vocabulary-learning strategies described earlier are ways of dealing with a body of incomprehensible material in terms of the "known". If one can discover the "key into a language", in a communicative context, language can be a self-informing system as long as one has this key or entry point.

**Cultural Aspects**

Another key feature was searching and sampling for cultural information related to Ilocano, which highlighted the tremendous power of the Internet in education. The importance of the Ilocano community's connection with Hawaii, and their relationship with, and identity in relation to, other Filipino groups became apparent. A wide range of materials, such as radio drama from Laoag, home-made films, Ilocano rap music and information about the *Bannawag* magazine, which supports Ilocano literature (Bragado, 1995) are examples of the range of easily assessable materials that greatly enhance and support the language learning enterprise.

**The Communicative Dimension**

The impulse to use Ilocano communicatively emerged strongly six weeks into the project. There is an Ilocano Facebook group, numerous other Ilocano chat rooms and social networking language exchange sites such as Lang-8 offer interesting possibilities. Communication can be approached using a sliding scale beginning with being a totally passive observer of online chat and moving gradually towards communicative confidence. During this phase of CALLiM, however, lack of confidence was a barrier to participation.

At a low level, one way of approximating communicative interaction from the earliest stages of learning is the paring of interrogatives with simple complimentary answers. This approach emphasises meaning more strongly than merely defining a word in English, or using it in an interrogative sense but not providing a complimentary answer. During CALLiM research, Ilocano interrogatives such as *asíno* [who] and *aniá* [what] with complimentary responses were practiced. When the Ilocano word for the answer was unavailable, English was used, preserving a feeling of communicativeness by permitting a multi-lingual environment. At the same time, the project engendered uncertainty as to whether the digital environment favours mere simulation, and facilitates approximation, rather than "genuine" communication? This begs the question: "When, and under what circumstances, is digital communication "genuine" and at what point does it become mere simulation?"

**Motivational Aspects**

Self-motivation may be a quality assumed in self-directed learners, but sustaining motivation over the course of the project was not without challenges. Aspects, which positively impacted on motivation, were:

- Using a variety of different rhythmic patterns during practice.
- The freedom to explore and access a variety of related cultural information and multimedia via the Internet.
- Computer Assisted Total Physical Response (CATPR): The freedom to stretch the body or perform other physical movements while doing language drills.

Greater motivation and musical enjoyment proceed from choosing songs in which the learner has a genuine interest. Unfortunately, when focussing on one particular text for a sustained period, listening to the same song multiple times and repetitive practice become tedious.[11] Exploring different versions of the same song can help counteract this. With such a wide range of multimedia available, the continued search for new and appealing items fuels the desire to "know" and "understand".

[11] Previous language study experience helped me to "suspend disbelief" and continue practicing patiently the same material while awaiting a result, but repetitive practice can undoubtedly be boring.

At times during the project, despite having the freedom to manage ones own time and activities, the experience of not wanting to do what was planned during a study session, and the clash between intentions as a planner and participant, was intensified. Other factors that decreased motivation were:

- Becoming busy with other tasks external to CALLLiM.
- Annoyance with rich input (RI) as a result of overload.
- Lack of understanding of, or trust in, the reliability of the text.

After a month and a half, the problem of not understanding anything at all in the Ilocano song lyrics remained. Without a dictionary from Ilocano to English it was not possible to look up the words. Also, there are variations in the online versions of the song "*Manang Biday"*, and there was no apparent way to assess the correctness of any particular version. These factors all impacted on motivation levels during CALLiM research.

**Digitizing the Pre-Digital Work Station**

Pre-CALL workstation items were adapted to the CALL environment in the following ways:

Items a), b) and c) in the pre-CALL environment (Short-wave radio, punch-play back cassette player and CD radio cassette player) were easily replaced in CALL, as the devices themselves occupy far less physical space and there is no need to keep CDs, cassette tapes and batteries on hand. Technology, particularly the Internet, offers a "seemingly infinite (e.g., web) access to rich input" (Doughty & Long, 2003, p. 49). When creating RI, multiple sound sources can be directed to a single set of headphones. Compared to the shortwave radio and online cassette player, the Internet offers vastly more resources. However, the sense of serendipity in discovery is reduced, and the task of choosing the best material is made more onerous by the huge amount of available material.

Item d), the mirror, was replaced in CALLiM with I-chat and a Logitech camera. Unless on a separate I-pad, in real time this approach affords far less physical flexibility than was provided by the simple mirror. The user is constrained by the position and size of the monitor. It is, however, possible to create still pictures, videos and screen shots with I-chat in order to record facial images for use in retrospective observation.

Item e), the electronic psittaciformes, was replaced in CALLiM with YouTube repeater, a relatively easy-to-use looping technology. Reviewing vocabulary through repetition is greatly aided by technology since the computer can tirelessly repeat segments of language. Although the pre-CALL pasittaciformes provided an aesthetic and tactile stimulation lacking in CALL, there is no doubt that working with a computer makes looping vastly easier and more effective.

Item f), pad paper, was replaced in CALL with Microsoft Word. Working without paper is ecologically sound, tidy and makes it possible to store vast amounts of written material. However, like the mirror, it is physically constrained by the monitor and keyboard. Writing on a pad with a pen or pencil viscerally reinforced the spatial dimension of individual letters, and required the constant use of only one hand. Typing uses both hands and involves patterns of movement as the fingers tap on a keyboard. These patterns are an extra level of abstraction, since they represent combinations of letters, which in turn represent the sound of words.

The author grew up and was educated to use a pen rather than a keyboard, and it may be the case that CALLiM practitioners who began using a keyboard at a younger age would experience visceral reinforcement differently. For the author, however, a separate I-pad to free up monitor space, and I-pen to maintain spatial, letter formation experience, are desirable. These were not trailed during the current

research. Beyond this, the move to the digital workstation encourages in reconceptualization of literacy itself and the way we "access, understand, and use information in reading, writing and interacting in our social and professional lives" (Chattopadhyay, p. 1).

Item g) the magnifying glass was replaced in CALLiM using font size tabs and zoom views. These were undoubtedly more effective than the pre-CALL magnifying glass but, as with other visual aspects, the size, position and availability of simultaneous viewing space were constrained by the monitor size.

Item h) textbooks, flash cards, dictionaries and other literature, were approximated in CALL by a variety of websites and multimedia. The URLs of some of theses site appear in appendix 4. Searching for cultural information about Ilocano on the Internet yielded a great deal of useful information, and this information can be conveniently stored.

It is difficult to gesture while holding a book. If the text is not available on the Internet or in a computer file, one can type the text into a document and then become hands-free. However, as with other items, despite bodily freedom, visual access is constrained by the physical properties of the monitor itself. Even though the computer allows unlimited RI possibilities, there is a problem fitting the various windows comfortably on one screen (for visual access). This is not a problem for purely music or spoken word files, but it is for other kinds of files, especially when there is a need to see text as in a Word document. Also, as has been emphasised, online Ilocano dictionaries were highly problematic during this study.

Google pictures replaced flashcards. As described earlier in relation to visually focussed language learning strategies, an image can quickly be copied into a word document and simple exercises using the picture can be created. Online, open source flashcard programs are available, and were tried during the study. Such programs currently lack a rich visual appeal, as might be found in contemporary gaming software. In this sense, they were not superior to pre-CALL flashcards, which held both an aesthetic and tactile appeal. Further, online flashcards, despite the possibility of conveniently storing mass numbers of virtual cards, were constrained by the monitor in terms of display. They freed the body, since the freestanding monitor displayed the cards, and there was no need to hold them physically. But, at the same time, they tethered the body to the monitor visually, and, unlike pre-CALL flash cards, move in a prescribed way within a limited visual plane.

The primary differences between the way music was incorporated in the pre-CALL and CALL environments were the wider range of music available for RI in CALL, and an increased emphasis on dance-like, rhythmic drills resulting from the power of the computer to free the body. These drills looped micro-chunks of language, unlike in pre-CALL, where acoustic instruments supported looping of full-length lexical chunks.

**Conclusion: Affordances and constraints and a sustainable approach to CALLiM**

In moving from pre-CALL to CALL environments, a number of inherent contradictions have come to light. The search for sustainability drew attention to the body, and bodily engagement in language learning through activities such as rhythm drills. Here the body is revealed as the sustainable thread, outliving changing technologies.

The application of Schön's model in this exploratory CALLiM research also helped to identify important issues and areas that require further research and investigation. Such areas appeared as evolving, accumulative strategies, such as the development of increasingly nuanced rhythmical drills, or the reapplication of a search strategy from a category such as "Spanish loan words" to another such as "high frequency words" or "monosyllabic particles".

The contemporary computer offers the extraordinary potential for hitherto unknown physical freedom in interacting with the machine, yet withholds it, by centralizing the visual focus (relevant musically in terms of song lyric texts) to the monitor. It is vital that future research into CALLiM examines the use of mobile

monitors, or multiple monitors to maximize the potential for employing "physically mediated musicality" (K. F. Rockell, 2009, pp. 235-236) in the language learning process.

The question of storage is also significant. Although the CALL workstation offers the potential to store almost unlimited quantities of multimedia and other files, to display such files in a way that approximates the visual richness of the pre-CALL environment, requires just as much physical space, yet offers only a bland one-dimensional view.

Vast resources are now available for RI, but sampling and assessing materials is impractically time-consuming, and the number of practically useful tracks in a RI set remains limited. In the case of writing in CALL, unless an extra or larger display is used, writing practice takes up an uncomfortable amount of space on the desktop and tends to be bound, in terms of location, to the keyboard.

To fully enjoy the benefits the computer now offers to self-directed language learners, it will be necessary to find ways to resolve these contradictions between expansive potential and simple, physical restrictions.

This study revealed that while there has been work done on Ilocano using computers, and there are considerable online resources for learning the language, a comprehensive, user-friendly dictionary was not available, forcing a time consuming, tedious word-list construction task that tended to interfere with the flow of learning. Online dictionaries for learners of languages featuring agglutinative verb forms, like those found in many Philippine languages, need to be designed to respond to a search term for a verb in any one of its conjugated forms, including the root form, by directing the user to the root form entry. This may seem an unreasonably complicated demand, but unless online dictionaries are designed in this way, they are almost useless for self-directed language learners in projects such as the current research.

In terms of music, this study affirmed the idea that music can be usefully applied to language learning. However, the limitations of a lyric based approach, with a fixed choice of song text were also apparent. It is clear that such texts need careful treatment, such as extracting formulaic language or lexical chunks from the main body of song text, for reapplication to looped musical drills, to be of benefit.

Using a computer for study is increasingly ubiquitous, and its lack, as in the pre-CALL workstation described in this paper may become of little more than historical curiosity. With visceral engagement as a constant, technological advances offer increasing ways of further freeing the dance component in CALLiM. Interactive screen projectors, Wii remote mice or Microsoft Kinect all demand immediate investigation. In the near future, computation surface veneers on walls and tabletops made of graphene coating promise to bring CALL into a new realm, and make possible the incorporation of music with constantly evolving efficacy – a subject for continued reflective practice in the future.

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## Appendices

### Appendix 1: Diary Key Codes

| Code | Term | Code | Term |
|---|---|---|---|
| App | Application | M | Methodology |
| AI | Auditor input and participation | Mem | Memory and recall |
| C | Comprehension | Mot | Motivation |
| Cul | Culture | Mus | Musical activity or focus |
| D | Dance | P | Problems, constraints, difficulties or challenges |
| Dis | Discovery | R | Resources |
| G | Grammar | SS | Searching and sampling |
| Ir | Irrelevant | Ust | Use of song texts |
| Lls | Language learning strategy | Vls | Vocabulary learning strategy |

### Appendix 2: *Manang Biday* (First two verses)

*Manang Biday, ilukatmo man*
*'Ta bintana ikalumbabam*
*Ta kitaem 'toy kinayawan*
*Ay, matayakon no dinak kaasian*

*Siasinnoka nga aglabaslabas*
*Ditoy hardinko pagay-ayamak*
*Ammom ngarud a balasangak*
*Sabong ni lirio, di pay nagukrad*

### Appendix 3: Laglagipem Awan Ti Nagkurangak (First two verses)

*Kasla diak maaklon pannaka pukaw ko*
*Kakaysuna nga ayat ko*
*Diak man ninamnama a masulisug ka*
*Bayat kaawan ko*

*Narukop man gayam dayta nakem mo*
*Kararua ken puso*
*Di mo pinanunot toy sakripisyok*
*Rigat ko ken tuok*

### Appendix 4: CALLiM URL list

CALLiM URL LIST

1 http://www.ted.com/talks/sanjay_pradhan_how_open_data_is_changing_international_aid.html

TED talk about how open data is changing international aid

2 http://www.youtube.com/watch?v=8lvD-9Rtu_4
Karaoke version of *Manang Biday* with lyrics on screen but no vocal track (only accompaniment is playing).

3 http://ilocanoonline.wordpress.com/tag/english-ilocano-dictionary/
Ilocano Online (the home page to the Online Ilokano Dictionary Project

4 http://en.wikipedia.org/wiki/Ilokano_grammar
Ilokano Grammar wiki

5 http://www.youtube.com/watch?=3jBjjxxrTDk
*Laglagipem* Duet version Man and Woman Photo of attractive girl on screen

6 http://www.youtube.com/watch?v=3xmJFyEbbx8
*Laglagipem* Solo female singing in front of computer. No lyrics visible

7 http://www.youtube.com/watch?v=vKeESxIS1sU
*Laglagipem* Karaoke version

8 http://www.youtube.com/watch?v=2ohEetQPnks
*Laglagipem* Home-made karaoke version with lyrics on screen

9 http://www.youtube.com/watch?v=HUwaZbRos1Y
*Laglagipem* Family in the Philippines singing together with one guitar

10 http://www.opmtunes.com/songs/l/lea-dansalan-laglagipem-awan-nagkurangak.html
Lyrics of *Laglagipem*

11 http://en.wikipedia.org/wiki/Ilokano_particles
Grammatical information about particles in Ilokano

12 http://www.youtube.com/watch?v=NS94mKPeCmE
Amateur performance of *Lalaglagipem* male adult with guitar

13 http://www.toidp.com/search/
The Online Ilocano Dictionary Project

14 http://www.youtube.com/watch?v=_ijqa6F9JP8
Version of *Laglagipem* with screen shot of girl in bikini

15 http://cogweb.ucla.edu/Discourse/Proverbs/Ilocano.html
Ilocano Proverbs and Sayings

16 http://www.youtube.com/watch?v=C-BZJmXWdwk
Amateur performance of *Laglagaipem* at home with electric guitar accompaniment

17 http://www.youtube.com/watch?v=6SnxPIXgEjE
*Laglagipem* version with band/karaoke backing a montage of photos of Filipino man wearing cap shooting in the woods.