

# Computer Assisted Language Learning (CALL): Room for CompLing?

Scott, Stella, Stacia

# Outline

I What is CALL? (scott)

II Popular language learning sites (stella)

Livemocha.com (stacia)

III Specific sites using compling (stella)

IV Summary (scott)

# What is CALL?

Scott

# What is CALL?

- Computer Assisted Language Learning
- Around since the 1960s
- One arm of Applied Linguistics
- Has been gaining in popularity in the past 10 years.

# What is CALL?

- The Four Skills:
  - listening
  - speaking
  - reading
  - writing
- Focuses on the **Communicative Approach**
  - language use over analysis
  - cf. grammar translation approach
- Students engage with the language at their own pace

# CALL as a pre-Web idea

- Downloaded CALL software was arguably crude
- "Click" to hear it pronounced
- Timed reading
- Structured language games and activities
- Computer guided language drills
- "anything to get the student engaged"

# CALL and the Web

- giant leap forward for CALL (and e-learning in general)
- Possibility to use multi-modal resources (seeing and hearing)
- Great for teachers, but what about students?
- Social networking changes everything, interaction w native speakers.
- But what about compling?

# CALL Resources

- Computer Assisted Language Instruction Consortium (CALICO)
- European Association for Computer-Assisted Language Learning
- SIGs:
  - NLP
  - virtual worlds
  - corpus CALL
  - Intelligent Computer Assisted Language Learning
  - Computer Mediated Communication--- blogs, wikis, e-mail, on-line forums, video- and audio- conferencing

# CALL sites and companies

Stella

# Websites to obtain CALL software

The Sussex Language Institute: <http://www.sussex.ac.uk/languages/1-6-6.html>

Word2Word: <http://www.word2word.com/coursead.html>

Rosetta Stone: <http://www.rosettastone.com/>

World Language Resources: <http://www.worldlanguage.com/>

Free Online MIT Course Materials: <http://ocw.mit.edu/OcwWeb/Foreign-Languages-and-Literatures/index.htm>

# Websites to Learn Another Language - methods

Good article on various places to learn a foreign language:

<http://www.bravenewtraveler.com/2008/02/04/8-free-online-resources-for-learning-a-new-language/>

Websites use a variety of techniques:

- *podcasts* - podcasts of actual conversations that website users download and listen to at their convenience
- games
- pdf or other document files
- audio / video files
- social networking - sites put a user in touch with native speakers where the native speakers either practice or offer to teach the user for a fee

# Websites to learn a foreign language - free

## BBC Languages

The BBC offers comprehensive online courses in French, Spanish, German, Italian, Mandarin Chinese, Portuguese, and Greek, with slightly briefer introductions to several other languages.

## MIT OpenCourseWare

The Languages and Literatures department features courses in languages such as Chinese, Japanese, French, German and Spanish in addition to many interesting literature and culture topics.

## Internet Polyglot

The Internet Polyglot provides study materials for twenty-one languages.

# Websites to learn a foreign language - free

## Word2Word

The Word2Word websites provides links to many different language learning sites. The site also provides links where a person can find language learning software.

## Apples 4 The Teacher

Fun educational website teaching Gaelic, Spanish, Polish, and ASL primarily aimed towards children.

LiveMocha.com

Stacia

# Livemocha.com : Online Language Learning Community

## 0. The industry

Traditional language learning techniques have been through classes or a CD based learning method like Rosetta stone. With the internet and web2.0 social sites, it's possible to merge the benefits of classroom interactivity with personal and self study. Several sites are trying out this approach: Busuu / Japanese/Spanish pod, iTalki, Edufire, myngle. They all have their pros and cons

I worked for Livemocha.com for a year so I'll be discussing how they work and where they could have used NLP

# 1. How it works

- User signs up and indicates their native language and language they're learning
- User can join "courses" in a language they're interested in.
- A course consists of several units with slide/string pairs. The strings can be displayed translated in the user's native language (if available)
- Users can also submit writing/speaking exercises to be critiqued by the community. Points and awards are given for participating in the site.
- Users can also participate in a live chat with someone who speaks the language they're learning for practice

## 2. Shortcomings from a linguistic perspective part 1

The "base" set of strings is very English centric and spends more time on issues specific only to English. More fallbacks are that lessons sometimes seem to not have a coherent theme and will introduce grammatical forms that are beyond the learner's level. Example:

A section exists on "irregular verbs" which spends a great deal of time on verbs that are only irregular in English. In another language, the verbs wouldn't be irregular, so a great deal of time is wasted going over the same verbs over and over, which doesn't warrant that level of detail in a language other than English.

## 2. Shortcomings from a linguistic perspective part 2

Set of strings were naively chosen without considering crosslinguistic implications. Example of pair of strings:

Someone is writing with her right hand.

Someone is writing with his left hand.

## 2. Shortcomings from a linguistic perspective part 2

These strings end up being the same in many languages, causing confusion.

A new feature, though exciting, has a major flaw. Livemocha is looking to crowdsource translations of the (already flawed) set of strings. A major drawback to this is that the base string that a user translates from can be chosen in any language, not just English. The problem here is reminiscent of the telephone or Google Translate game. Example:

Users translate Arabic using source strings from English or French. Arabic course is published. Now more users can translate using the source string from Arabic...

# 3. Where Comp Ling could help

- Morphological analyzer and dictionary (linking to Premiumgrammar cards)
- POS tagging
  - part of speech could link to Premium grammar cards, entry on Noun, for example. Could use crowdsourcing for wrong entries.
- Simple grammar parser that user could interact with and get feedback about grammaticality
  - Could also be used to fix the "magnet" game on languages that have free word order
- Perhaps an algorithm is available to compare phonemes to a native speaker's accent, and give feedback on how "native" a speaker sounds in their speaking lessons

# CALL Sites using CompLing

Stella

# Websites using CompLing

## Candle

an ongoing 3-year project which uses various corpora and NLP technologies to construct an online English learning environment for learners in Taiwan - most of the site is in Chinese

## VISL

VISL is a research and development project at the Institute of Language and Communication (ISK), University of Southern Denmark (SDU). Since September 1996, staff and students at ISK have been designing and implementing Internet-based grammar tools for education and research.

# Candle (features quoted from site)

- Monolingual, Bilingual, Speech and Learner Corpora
- Part of Speech Tagging, Chunking and Parsing
- Bilingual Concordance, Semantic concordance and WordNet
- Text-to-Speech Server
- Phrase/Collocation Translator
- Automatic Generation of CALL activities /Automatic Evaluation/Grader of Translation Quality Based on BLEU.

# Brief Candle Demo...

Collocation checker:

<http://candle.fl.nthu.edu.tw/vntango/>

'make album' or 'publish album' ?

## Collocation Checker

Version 3.0 (last updated: 04/5/2012)  
Best view 1024\*768 with IE 5.0 ab

- 1 Please enter the collocation you want to check (with V+N structure)

- 2 Checking results (BNC frequency):

[L1-interference Miscollocation]

Possible collocation suggestion:

[release album \(25\)](#)

[do album \(18\)](#)

[make album \(18\)](#)

[issue album \(3\)](#)

[work on album \(5\)](#)

- 3 Click the links to see each example

release album

1 2 3

目前範例筆數：24

### Instance 1

My attitude is that if a band manages to **release** a second **album** of poor songs four months after their first album left number one in the charts , it is 't worth the rush .

### Instance 2

This example might seem unrealistically pessimistic , as a new band may feel confident of being able to record and **release** their **album** in just a few months , with money from sales and royalties quickly starting to now in .

### Instance 3

They **release albums** in lavish Seventies-style gatefold sleeves .

### Instance 4

Next summer , ocs will **release** an **album** .

### Instance 5

Cashing in on the interest , Donovan is **releasing** his own **album** later this year .

### Instance 6

# Another Demo...

Concordance:

How is 'influence' used?

Search : influence

Verb  Noun  Adjective

Collocation type :

目前查詢字串 : influence

搜尋筆數 : 26

⇒ [have influence\(31\)](#) | [have influence on\(20\)](#) | [have influence in\(1\)](#) | [have influence throughout\(1\)](#)

In addition, Taiwan is trying to strengthen so-called "track two" communications between think tanks in the roc, pro, and US. " Think tanks **have** a considerable **influence** on government policies. Strengthening contacts between the three sides would help mutual understanding," says Lee.

除此，我國也將加強台中美三地智庫的「第二管道」溝通與聯繫。  
「智庫對於政府決策有**相當的影響力**，三方之間加強聯繫可以幫助相互了解」，李匯元說。

⇒ [exert influence\(6\)](#) | [exert influence for\(1\)](#) | [exert influence throughout\(1\)](#) | [exert influence upon\(1\)](#)

Opening a newspaper to the congratulatory messages on the appointment of a new chairman, gives one an indication of the scale of the society. There are five deputy chairmen, as well as honorary advisors, consultative committee members, permanent advisors, board members, a cultural and membership is nearly 400, less than 20 of whom are actual singers and musicians. The major task of the chairman is to **exert** his **influence** to attract prestigious new members.

翻開報紙，慶祝新理事長就任的報紙賀文上，可以看到郎君社的組織真不小，理事長之外，還有五個副理事長，其他包括名譽顧問、諮詢委員、常務顧問、理事會、文教委員會等，夯不啣喘的有會員將近四百人，然而其中能彈能唱的不到二十人。

# Summary

Scott

# In general, how can CompLing be used in CALL?

- **Potent combination:**
  - **Social networking**
  - **compling**
- **the power of text and having access to native speakers**
- **beyond spelling and parsing for grammar checking**

# Other experimental ideas:

- **information extraction** over a focused domain, used to create materials for ESP (English for Special Purposes)  
e.g, coal mining English, why not **open-pit coal mining English**?
- **dialogue system** tutors for beginners  
Learner: I have went to Beijing  
Teacher: Do you mean "I have gone to Beijing"?