

Technology Enhanced Learning & DELPH-IN

- ▶ A bit of the New (English, ERG)
- ▶ A bit of the Old (Mandarin Chinese, ZHONG)



The New: Feedback on Student Essays

- ▶ **Small EdeX Grant (NTU's internal grant)**

We're collaborating with NTU's Language and Communication Centre

- ▶ **We have produced a Learner Corpus**

(~6k sentences, English assignments, error tagged, open data, to release soon)

- ▶ **We're building a Submission System with feedback** (pre-submission)

- ▶ **Run multiple checks**

Pet Peeves [e.g. 'hassle', 'tackle'], N-Gram Similarity, Sentence Length, etc.



- ▶ **Next: Plug in ERG**

Plug in ERG (to check for grammaticality, tense shift, imperative/questions, etc.)

- ▶ **Controlled experiment to happen in October**

- ▶ **Good results might lead to a follow up grant**

The Old: MT in CALL for Mandarin

Student:	That dog like the cat happy.
	<p>Hmm... something is wrong with your sentence. Did you mean any of these?</p> <p>A. 那只狗和猫一样高兴。 [That dog, like the cat, is happy.]*</p> <p>B. 那只狗喜欢猫高兴。 [That dog likes the cat happy.]*</p> <p>C. 那只狗喜欢高兴的猫。 [That dog likes the happy cat.]*</p>
Student:	C. 那只狗喜欢高兴的猫。
	<p>Ok! Then I believe you forgot to conjugate the verb 'to like'. Also, remember that an adjective must come before the noun it's modifying. Please try again!</p>

* The English translation is what the system thinks is correct, but it is not shown.

The Old: MT in CALL for Mandarin

- ▶ **Prescriptive Grammars**
(We're not looking for full coverage)
- ▶ **Graded Lexicons & Graded Parsers**
(From surveying educational materials)
- ▶ **Implementation Mal-Rules ('error production rules')**
(From Learner Corpora)
- ▶ **Random Exercises (e.g. build a sentence, ...)**
(Controlled for both grammar and lexicon levels)
- ▶ **Pairwise Semantic-based Translation / Disambiguation**
(Eng ↔ Cmn)
- ▶ **Automatic collection Learner corpora**
(Ungrammatical input + tree-banked, sense-tagged corrected sentence)
- ▶ **Controlled experiment using NTU students of Mandarin L2**

Updates

- ▶ **Slightly behind schedule**

We'll ask for a 6 month extension, giving us 1 year from now

- ▶ **We've finished with sense tagging Graded Corpus**

Next: Tree-banking the Graded Corpus

- ▶ **We've finished error tagging Learner Corpus**

(~5k sentences, 1.6k errors, statistics to come soon)

- ▶ **We've implemented a few simple Mal-Rules**

(e.g. copula + adjectival predicates, ...)

- ▶ **Flask Web Interface skeleton is functional**

Next: plug pyDelphin and start playing a bit

- ▶ **To Do: Semantic-based Disambiguation**

- ▶ **PhD: extend (incl. Japanese, English) & Student modelling**

Thank You!

- ▶ **Come and find us at a SIG near you** (later this week)