Intelligent
Computer-Assisted
Language Learning
Detmar Meurers
Universität Tübingen
Introduction

Intelligent Computer-Assisted Language Learning

An introduction to an emerging interdisciplinary field

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based on joint research with the ICALL Research group in OSU and Tübingen:
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► Computers widely used in foreign language teaching to help learners experience a foreign language & culture.
  ► multimedia presentations, web-based TV/radio/news, email/chat with native speakers, . . .

► Apart from the undisputed role of such contextualized, communicative language use, which other aspects of language learning are relevant in this context?

► Research since the 90s has shown that **awareness of language forms and rules** is important for an adult learner to successfully acquire a foreign language.
  ► (cf., e.g., Long 1991, 1996; Ellis 1994; Schmidt 1995; Lyster 1998; Lightbown & Spada 1999; Norris & Ortega 2000)

Linguistics and NLP for ICALL

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► Linguistic analysis and NLP technology can be used to
  ► foster learner awareness of language forms & categories
  ► provide individual feedback on learner errors

► Some ICALL research (cf. Heift & Schulze 2007), but:
  ► Very few ICALL systems used in FLT practice today
    (Heift 2001; Nagata 2002; Amaral & Meurers 2006).
  ► Hardly any corpora of learner language are available with linguistic or error annotation.
  ► Very limited research on the use of authentic texts, e.g.:
    ► automatic exercise generation
    ► web/document retrieval for language learning

► Problem: lack of interdisciplinary research combining computational, linguistic, and FLT/SLA expertise.

► Our general approach:
  ► Link CL research to genuine SLA and FLT needs
  ► Focus on where linguistic modeling plays a role

Idea and Structure of the Course

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Introduce theoretical and practical issues of (computational) linguistic modeling for SLA/FLT, driven by current research:

I. & II. Intelligent Tutoring Systems: Individualized feedback
  ► TAGARELA: An intelligent, web-based workbook in support of traditional teaching of Portuguese
    (Amaral & Meurers 2005, 2006; Ziai 2009)

II. Learner Modeling (Amaral & Meurers 2008)

III. How about Meaning? (Bailey & Meurers 2008)

IV. On the Annotation and Use of Learner Corpora
  (Díaz-Negrillo, Meurers, Valera & Wunsch 2009)

V. Automatic analysis of native texts for language learning
  ► Working with English Real Texts (WERTi): Language awareness activities using enhanced real-life texts
    (Amaral et al. 2006; Metcalf & Meurers 2006)
  ► Information Retrieval for Language Learning (Ott 2009)

Practical matters

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- There is a course page, accessible from the teaching section on my home page: http://purl.org/dm (or just google my name).
- I will update the slides and pointers on that course page after the lectures.
  - Let me know of information you'd be interested in finding on that page.
- And, of course, don't hesitate to contact me any time during ESSLLI in person or by email:
  dm@sfs.uni-tuebingen.de

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