Individualized feedback for lexical stress errors

Towards a CAPT system for French learners of German

Anjana Sofia Vakil

M.Sc. Thesis proposal
Language Science and Technology

Prepared under the supervision of
Prof. Dr. Bernd Möbius
Dr. Jürgen Trouvain

Saarland University
Department of Computational Linguistics & Phonetics

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Contents

Introduction

Hello, here is some text without a meaning. This text should show what a printed text will look like at this place. If you read this text, you will get no information. Really? Is there no information? Is there a difference between this text and some nonsense like "Huardest gefburn"? Kjift – not at all! A blind text like this gives you information about the selected font, how the letters are written and an impression of the look. This text should contain all letters of the alphabet and it should be written in of the original language. There is no need for special content, but the length of words should match the language. (Duong et al., 2011).

Sitaram et al. (2011) says blah blah blah.

1.1 Context: The IFCASL project

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1.2 Objectives

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1.3 Thesis overview

Hello, here is some text without a meaning. This text should show what a printed text will look like at this place. If you read this text, you will get no information. Really? Is there no information? Is there a difference between this text and some nonsense like "Huardest gefburn"? Kjift – not at all! A blind text like this gives you information about the selected font, how the letters are written and an impression of the look. This text should contain all letters of the alphabet and it should be written in of the original language. There is no need for special content, but the length of words should match the language.

Background and related work

2

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2.1 Computer-Assisted Pronunciation Tutoring

2.1.1 Pronunciation in foreign language education

2.1.2 Computer-based and intelligent tutoring systems

2.1.3 Survey of existing CAPT systems

2.2 Towards CAPT for French learners of German

2.2.1 Phonetic and phonological comparison

Segments

Prosody

Other factors

2.2.2 Targeting lexical stress errors

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Figure 2.1: Criteria for selecting errors to target in a CAPT system.

Frequency of production

Impact on intelligibility

Feasibility of automatic detection

2.3 Summary

System overview 3

Diagnosis of lexical stress errors 4

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4.1 Related work

4.2 Automatic segmentation of nonnative speech

4.2.1 Segmentation via forced alignment

4.2.2 Evaluation of system accuracy

4.2.3 Coping with segmentation errors

4.3 Prosodic analysis

4.3.1 Pitch

4.3.2 Duration

4.3.3 Intensity

4.4 Comparison of native and nonnative speech

4.4.1 Using a single reference speaker

Manually selecting a reference

Automatically selecting a reference

4.4.2 Using multiple reference speakers

4.5 Summary

Feedback on lexical stress errors | 5

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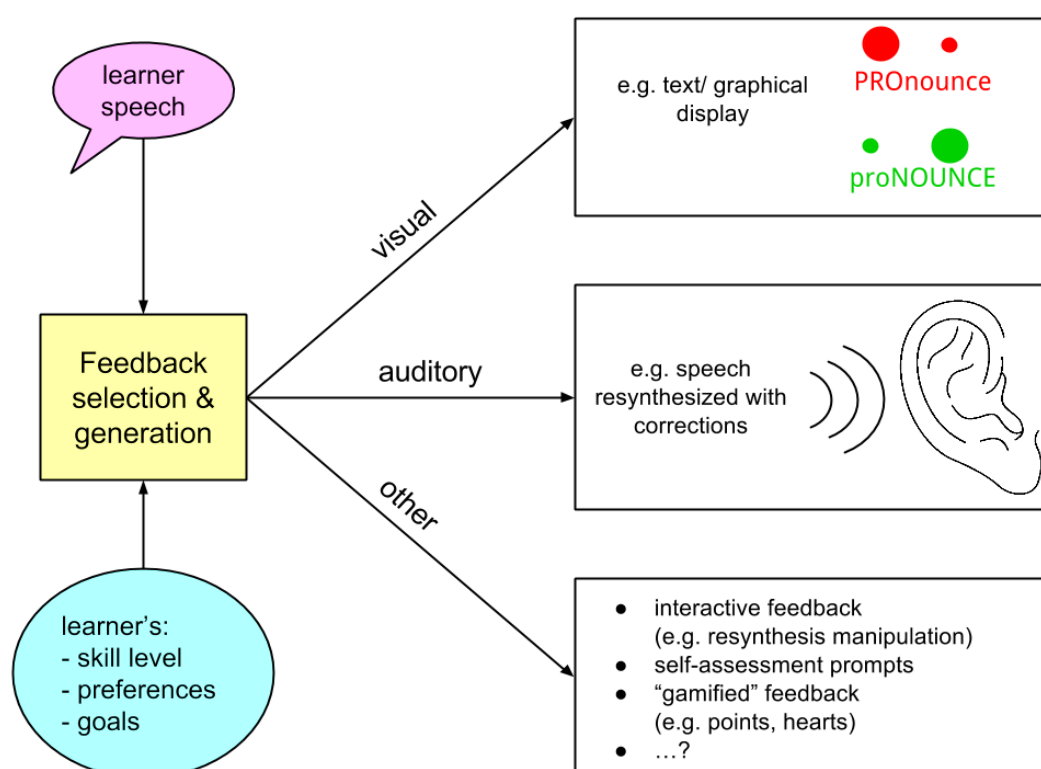

Figure 5.1: Delivery of prosody feedback in different modalities.

5.1 Related work

5.2 Visual feedback

Conclusion and outlook 6

6.1 Thesis summary

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6.2 Future work

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