Making Web-based Lectures on English Phonetics: an interim report*

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1 Introduction This paper is concerned with the teaching and learning of English Phonetics in distance education. The web-based lecture on English Phonetics has been created as part of a large and long-standing plan, the *Media Lecture* project which has been carried out by the correspondence division of Nihon University, Japan. This paper describes the background of the Media Lecture project in section 2. Section 3 outlines the contents and structure of the Media Lecture on English Phonetics (hereafter the ML English Phonetics). Finally, in section 4, the prospects for future research are summarised.

2 Media Lecture Project The fundamental characteristic of distance education, or distance learning, is that the instructor and the learners are separated in space and time. This is closely related to some of the major issues in distance learning (Sherry: 1996): methods or tools to increase the students-instructor and the between-students interaction, learning with self-instruction (active learning), and learner support. In the conventional system of the correspondence course, students work on their own, with supplied course materials and postal communication. Generally speaking, the students are in a situation where independence and autonomy are required. It is often the case that they feel isolated and become less motivated, and eventually abandon the study activities. The use of IT equipment to improve interactivity poses a challenge for distance education.

The *Media Lecture* Project started in 2003 in the correspondence division of Nihon University. The primary aim of the project is to develop and evaluate a communicative learning environment and a user-friendly system for the distance learners. The project has been funded by the Ministry of Education, Sports, Science and Technology in Japan; the programme promotes the advancement of education and research and the development of IT environments to enhance the special assistance available for distance learning. Since 2003 a variety of teaching materials have been accumulated for the VOD database and the system of web-based lectures has been developed. Various ML courses, such as psychology, statistics, and a history of English literature, have been created. Currently, the University offers 52 ML courses for the distance-learning students. The ML English Phonetics is one of them and has started from April 30, 2007.

The ML courses were introduced as one option for studying the given subject. There are two other ways. One is to submit several essays on the assigned topics, based on the textbook supplied. The other is called ‘schooling,’ an intensive course where the students actually come to the university to attend the class(es) during a pre-arranged period of time (e.g. one week) in spring, summer, or autumn. After they pass at least one of the three options, they can take the final examination in the given subject.

3 Contents and Structure of the ML English Phonetics

3.1: Technological Aspects of the ML courses

The ML English Phonetics, like other ML courses, consists of three fundamental components. The course page (lecture) is presented to the registered distance-learning students as normal HTML web pages which involve interactive multimedia materials

designed using Macromedia (Adobe) Flash. A public email system is used for the one-to-one interaction between instructor and students: the email exchanges, such as questions-answers, can be read by other students. The public discussion board system (i.e. BBS) is another communication tool to exchange messages, observations and opinions with other students. These three components are implemented in a general interface system called 'NU-C-Learning' originally developed by the University.

3.2: Contents of the ML English Phonetics

The ML English Phonetics is designed for undergraduates in English linguistics and literature. Basic points underlying the content development are the following: (1) to raise awareness of the pronunciation of the first language (i.e. Japanese), (2) to introduce the fundamental aspects of English Phonetics, and (3) to practice English pronunciation, speaking and listening.

The course is organised in two parts, A and B. Each part consists of twelve lectures (or chapters). The lecture topics are inspired by the reference books such as Ashby & Maidment (2005), Collins & Mees (2003) and Takebayashi (1996). Table 1 below summarises the lecture topics for the two parts.

	Part A		Part B
1	Speech Communication	1	Prosody: an overview
2	Organs of Speech	2	Rhythm
3	Consonants in Japanese	3	Word Stress
4	Vowels in Japanese	4	Compound Stress
5	Basic Phonological Concepts (1)	5	Exercises (1): rhythm & stress
6	Vowels and Diphthongs in English	6	Intonation (1): an overview
7	Consonants in English	7	Intonation (2): tone
8	Syllable and Consonant Clusters	8	Intonation (3): phrasing & sentence stress
9	Exercises (1): vowels & diphthongs	9	Exercises (2): stress & intonation
10	Exercises (2): consonants	10	Connected Speech Processes
11	Basic Phonological Concepts (2)	11	Exercises (3)
12	Phonetic & Phonological Transfer	12	Transfer in Prosodic Patterns
	Final Examination		Final Examination

Table 1. The List of Lecture Topics

Part A and B focus on the segmental and the suprasegmental aspects respectively. The basic framework of phonetic analysis in lectures 1 to 5 in part A is exemplified by the pronunciation of Japanese (the first language for most of the students). At various points in the lectures we refer to phonetic characteristics of Japanese. Such an approach is intended to shift student's focus on what they do in everyday conversations, which will be the basis for learning the pronunciation of English.

3.3: Recording

For each lecture the instructor prepared the reading manuscript in Japanese. The video recording was made for the introductory remarks of the lectures. The audio recording was made for the main body of the lectures (recorded at 44.1KHz (16bit, mono) and downsampled at 4KHz). Also, two male native speakers of English took part in the recording: one from England (Southern British accent) and the other from the U.S. (West-midland accent). They read words from the Standard Lexical Sets (Wells: 1982), various minimal pairs, phonetically structured sentences, and short passages.

3.4: Visualisation and Concept Formation

A common form of on-line lecture involves only a video of the instructor giving the lecture. In contrast, the web-based lectures created by the ML project take advantage of the positive effects of varied visual imagery to motivate and stimulate an interest in the learning process. When students select and view a certain chapter in a web browser, the lecture starts with a streaming video, by which the instructor provides an overview and aims of the given chapter. Figure 1 below shows a screenshot of an introduction page.

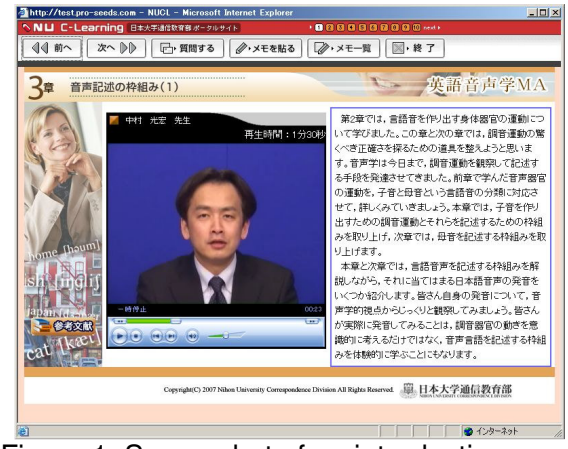

Figure 1. Screenshot of an introduction page

The main body of the lecture is organised as a sequence of different kinds of 'scenes' (see Figure 2). Each scene contains animated objects, examples, pop-up balloons and explanatory texts. These elements successively appear on the page as the instructor's talk flows. Navigation between the scenes is made by basic 'play/pause,' 'back,' and 'next' buttons. Students can study content linearly or can jump to a particular section. Visual and audio documents, references, the reading script for the given scene are accessible by clicking the buttons (the orange ones on the left-hand side on the page).

Figure 2. Screenshots of Scenes

3.5: Self-check and Exercises

At the end of every chapter multiple-choice or fill-in-the-blank questions are provided for reviewing the contents of the given lecture. Several chapters are devoted to transcription, pronunciation, speaking and listening exercises. They are designed to help students develop both an understanding of the given lecture and practical skills. The scoring of the answers is automated and frequency of students' access is automatically calculated.

4 Prospects Various aspects of the course are to be the subject for future research: the usability of the system, teaching and learning environments, the design of the course, and the visual and audio presentation of the materials. The evaluation necessarily involves the characteristics of the distance learners. They largely differ in age and background: the starting point and goal of studying English phonetics may also differ substantially. Figures 3 and 4 summarise the age range and occupation of the students registered for the ML English Phonetics (part A) 2007 (surveyed on April 12, 2007). The student population is widely distributed over Japan and some foreign countries such as the U.S.

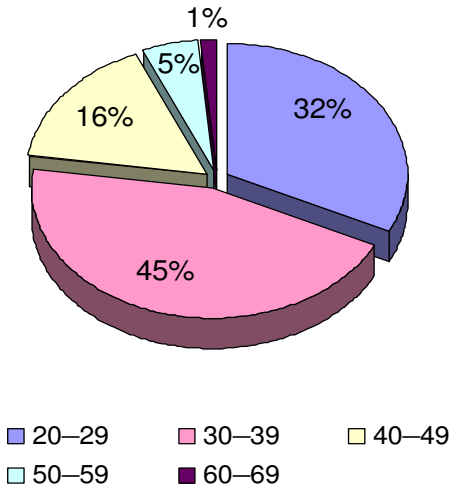

Figure 3. Students' Age (n=140)

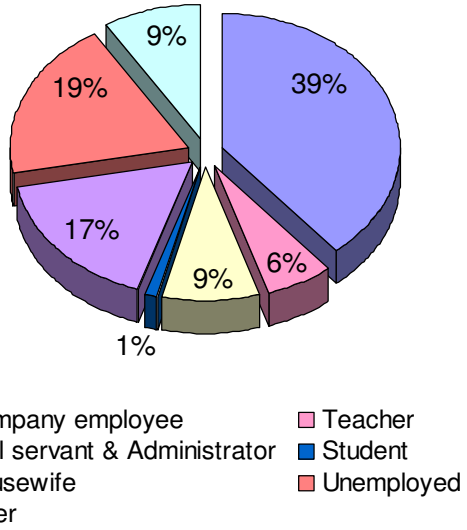

Figure 4. Students' Occupation (n=140)

It is our plan to conduct research by an evaluation questionnaire at the end of the current course (part A at the beginning of July 2007). Part B, which will run in the autumn semester (from October to December, 2007), will be evaluated in a similar way. One of the tasks is to compare the assessments by different student-groups. The analysis of the results obtained for the ML English Phonetics part A will be reported at PTLC 2007.

5 References

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