

# Assessing the Usefulness of Automated Classroom Lecture Recording in a Medical English Course

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## **Abstract**

Many universities around the world now use Automated Classroom Lecture Recording (ACLR) to complement conventional lectures for courses in a variety of subjects. However, use of the technology specifically in the language learning classroom has not been reported. In the present study, usefulness of ACLR was assessed in a medical English course for nursing and medical technology majors at a Japanese health sciences university. Lectures were recorded weekly in a 15-week semester and made available for student viewing at a university designated website. A class survey done at the end of the semester showed that of the 91 students enrolled in the course, 90% had watched the recorded lectures at least once as compared to only 10% who had not viewed them at all. Of the former, most found the recorded lectures useful to review and understand the material and particularly to learn correct English pronunciation. These results support the use of ACLR technology as an aid in teaching English for Specific Purposes such as medical English.

**Key Words:** Automated Classroom Lecture Recording, English for Specific Purposes, medical English, nursing, medical technology

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## Introduction

Automated Classroom Lecture Recording (ACLR) is a web-based technology that is now employed worldwide by many institutions of higher learning to provide increased and flexible access to classroom lectures<sup>1)</sup>. The technology enables the teachers to record their lectures and the students to view them after the actual lecture period, generally on a designated website made available through the institution's computer information management system. Two well-known ACLR systems currently in use are Lectopia developed at University of Western Australia<sup>2)</sup> and DukeCapture produced by Duke University<sup>3)</sup>.

Most universities that employ ACLR technology generally use it to record lectures for a wide variety of courses in multiple disciplines ranging from arts to sciences. Exact details of the subjects involved, however, are not available and there is no specific report as such on the use of ACLR in the language classroom. The main objective of the present study was to determine the usefulness of ACLR in teaching a medical English course for nursing and medical technology majors at a Japanese health sciences university.

## Methods

### 1. ACLR system used

The ACLR system used was CONTENTS MEISTER

developed and marketed by Panasonic System Solutions Japan Co., Ltd. The main features of the system are as follows:

- 1) Both the audio and visual components of the lecture can be recorded.
- 2) The visual component of the recordings can also capture the PowerPoint slides projecting them on the screen.
- 3) The teacher can initiate and stop the recording at any time during the lecture.
- 4) After the lecture has been recorded, the system allows the teacher to edit it and give authorization to make it available for student viewing.
- 5) As a part of the authorization process, the teacher can specify the period during which the lecture can be viewed by the students.
- 6) At any time during the lecture viewing availability period, the teacher can edit the recorded lecture and terminate or make changes in the viewing period.
- 7) The recorded lectures can be viewed through a personal computer wherever the internet is available.

In the present study, the recorded lectures could be viewed by the students only on campus in the university's computer management room at a course designated website. The website was accessible through a password made available exclusively to the students registered for the course. Informed consent was obtained from the teacher who gave the lectures (the author) to transfer the copyright of the recorded material to the host university.

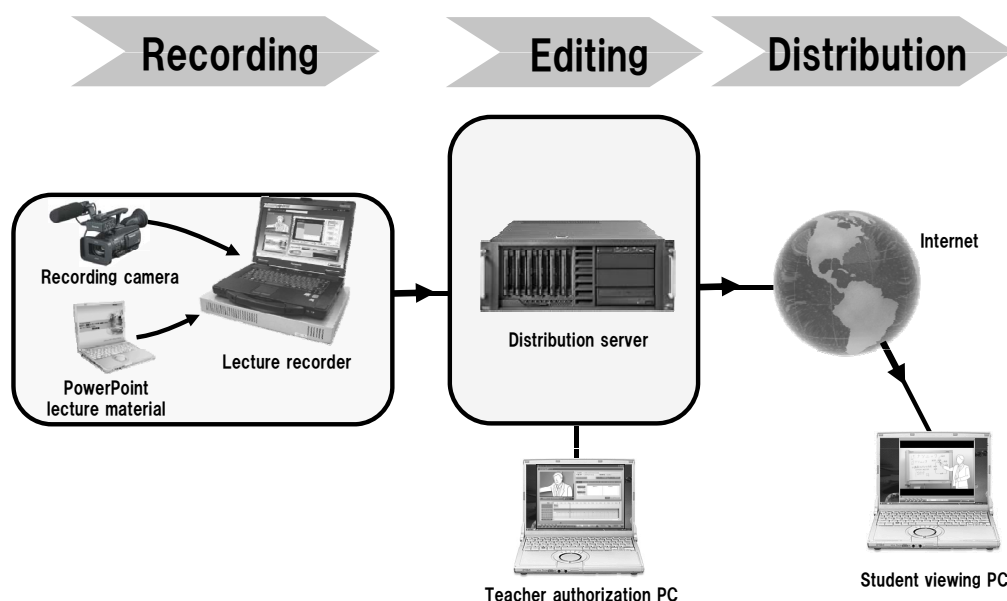


Figure 1. An outline of CONTENTS MEISTER ACLR system depicting its Recording, Editing and Distribution components

An outline of CONTENTS MEISTER ACLR system depicting its Recording, Editing and Distribution components is shown in Figure 1.

## 2. The course

The lecture recordings were done in a required medical English course for students in nursing and medical technology majors. The course is taught jointly in the first semester of the first year of both majors which are 4-year undergraduate programs at the university where the study was done. The objective of the course is to enable the students to express themselves and communicate in English on a series of topics related to basic medicine and healthcare through development of reading, writing, listening and speaking skills. Toward this goal, students are introduced to various topics in basic medicine and healthcare through an interactive approach that involves reading and listening to a set of questions and answering them both orally and in writing. Students also practice pronunciation using a pronunciation practice guide (PPG)<sup>4)</sup> designed for use by the Japanese students in the study of English as a foreign language (EFL). PowerPoint is used to introduce new material as well as for all interactive activities and pronunciation practice. The lectures for the course are held weekly for 15 weeks and each lecture is of 90 minute duration.

## 3. Students

A total of 91 students including 70 nursing and 21 medical technology majors, were enrolled in the

course in the semester when lecture recordings were done. All students were freshmen and taking an EFL course for the first time since graduating from high school. Students were given a password that they could use to access the course website and watch the lectures in the university's information management room as described under Methods.

## 4. Lecture recordings

Lecture recordings were done weekly starting from week 2 of the course. No recording was done in the first class since it involved introduction and orientation to the course. Thereafter, recording was done each week until week 14 of the course. Students were encouraged to watch the recorded lectures by giving them a written and/or oral test each week based on the content of the previous week's lecture. No recording was done in the 15<sup>th</sup> week or the final class which entailed a written test and a course evaluation survey.

## 5. Course evaluation survey

The course evaluation survey was done using a questionnaire that included items concerning the course content as well as the use of ACLR system. Concerning the latter, the questionnaire included the following two questions:

1. Did you watch the recorded lectures for this course?
2. Do you think that watching the recorded lectures for this course is useful?

For each question, the students were asked to

**Table 1. Student responses to survey questions 1 & 2**

Survey Questions	Total number of respondents	Number of YES responses (%)	Number of NO responses (%)
1. Did you watch the recorded lectures for this course?	91	82 (90%)	9 (10%)
2. Do you think that watching the recorded lectures for this course is useful?	76	68 (89%)	8 (11%)

choose YES or NO and then give a reason for their choice.

The survey was conducted in the final class for the course. The survey questionnaire was handed out toward the end of the class and students were given 15-20 minutes to complete it.

## Results

Results of student responses to the two course evaluation survey questions concerning the lecture recordings are shown in Table 1. All 91 students who took the course completed the questionnaire and answered question 1. In response to question 1, 90% (82/91) of the students answered YES while the remaining 10% (9/91) replied NO. Of the 82 students who answered YES to question 1, 76 also answered question 2 with 89% (68/76) saying YES and 11% (8/76) saying NO.

Of those students who answered YES to question 2, 93% (63/68) gave a clear reason for their answer. Ten typical reasons given by these students for their YES response to question 2 are given in Table 2. A majority (68%) of the reasons given related to general usefulness of the recorded lectures as reflected by responses 1-7 whereas the rest (32%) concerned their benefit for learning English and pronunciation of English words, as indicated by responses 8-10.

Among the 8 students who replied YES to question 1 but NO to question 2, 5 (62%) gave the reason as not being able to watch the lectures at home while the remaining 3 (38%) gave the following answer each: "It is needless," "It's too long," and "Password is very trouble."

Regarding the 9 students who answered NO to question 1, 5 gave the reason as having no time

to watch the lectures, while the remaining 4 gave the following answer each: "I don't know what to watch," "I like to consult directly to professor," "I didn't need it," and "I don't know watch way." One of these 9 students answered YES to question 2 and gave the following reason: "We can listen to live English." Concerning the remaining 8 students' responses to question 2: 5 said they did not know if watching the recorded lectures was useful since they did not watch them; 1 answered NO but gave no reason; and 2 did not answer the question.

## Discussion

The finding of increased satisfaction by the students with the use of recorded lectures in the present study is in agreement with similar results obtained in a large survey of over 800 students at four Australian universities<sup>2, 5</sup>. In the survey, a majority of students from all four universities found that the recorded lectures made it easier for them to learn by providing flexibility in viewing and as an additional learning tool for exam revision and note taking<sup>5</sup>. The reasons given by the students in the present study also reflect similar opinions.

In the Australian student survey<sup>2, 5</sup>, the subjects or courses for which the lectures were recorded were not indicated. Results of the present study, however, suggest that ACLR may be of particular advantage in teaching English for Specific Purposes in EFL settings. In the Japanese EFL context, college students are known to have minimal oral<sup>6</sup> and writing<sup>7</sup> skills and, therefore, study of English in their specific discipline presents great challenges for them<sup>8, 9</sup>. Particularly in areas such as medicine where the terminology has mostly Greek or Latin

**Table 2. Ten typical reasons given by the students for their YES response to survey question 2**

Students' responses (unedited)	
1. We can study after lecture.	6. We can review the lecture when we are free.
2. We can watch the lectures many times.	7. Because I could take notes more clearly.
3. Because it is useful to study before test.	8. Because I can understand English.
4. I could find my mistakes.	9. I learned medical word in English
5. I can understand when I can't understand in class.	10. If I want to know how to pronounce the word, I could know it by watching the recorded lecture.

origins<sup>10)</sup>, learning the novel and complex medical terms and their pronunciations can become extremely difficult. In such a scenario, additional availability of PowerPoint slides supplemented with audio recording of the classroom lecture can be of immense aid for the learners. Indeed in the present study where lecture recordings were done in a medical English course, students indicated that the recorded lectures helped them learn medical words, correct spelling mistakes, and to recall, review, reconfirm or practice English pronunciation.

L1 interference in pronunciation is known to be a major obstacle in L2 oral performance by Japanese learners of English<sup>11)</sup>. In the present study, a pronunciation practice tool, PPG, designed specifically for minimizing L1 interference in the Japanese EFL classroom<sup>4)</sup> was used in conjunction with ACLR. Although the study did not focus on the assessment of PPG itself, many students indicated that the recorded lectures helped them practice pronunciation using the PPG. Future studies could focus on evaluating the effectiveness of PPG with and without the use of ACLR to measure the effect of the technology in overcoming L1 interference.

Although few in number, it is important also to consider the responses of those students who either did not watch the recorded lectures or watched but did not find them useful. The most frequent reason given by the students who did not watch the recorded lectures at all was having no time to do so. At the same time, most of the students who watched the lectures but did not find them useful gave the reason for this as not being able to watch the lectures at home. These responses underscore the need to make the recorded lectures more accessible to the students. Indeed, in order to fully achieve the objectives of using the ACLR technology, it would be necessary to give the students greater flexibility and ease in terms of when and where they can watch the recorded lectures. Student responses in the present study suggest that making the recorded lectures available for viewing at home would result in increased usefulness of the technology.

## Conclusion

Results of this study support the use of ACLR technology as an aid in teaching English for Specific Purposes such as medical English especially in EFL settings like Japan. A majority of Japanese university

students taking a medical English course where lectures were recorded weekly and made available for later viewing, found the technology to be useful for their study of the subject overall and in particular for learning and practicing pronunciation of English words.

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## 要旨

現在世界中の多くの大学が、様々な科目で、従来の講義を補足するために自動講義収録 (Automated Classroom Lecture Recording) (ACLR) システムを使用している。しかしながら、外国語の講義における、このシステムの使用例は報告されていない。本研究では、日本の看護師と臨床検査技師を養成する保健医療系大学の医学英語の講義におけるACLRシステムの有用性について報告する。講義は、1学期間 (15週) 毎週収録し、学内の情報処理教室において、指定されたウェブサイトで学生が見ることができるようにした。学期の終わりに行ったクラス調査の結果、講義履修者91人の内の90%が収録された講義を少なくとも一回は視聴したに比べ、10%は全く見ていなかったことが判明した。視聴した者の大部分は、収録された講義が授業の復習や理解、特に正確な英語の発音を学習するのに有用であると回答した。これらの結果は、医学英語のような専門言語の講義において、ACLRシステムは極めて有用であることを支持する。

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