Studies on the Learning Process Using Broadcast Television and its Recorded Version in Video Cassette

Shigeru Wakamatsu

Abstract

The learning process using broadcast television and its recorded version in video cassette has been investigated. It was observed that students who watched TV lecture "on time"(i.e. at their regularly scheduled broadcast time) had a high rate of successfully passing courses and getting credit for them. In addition, students strongly agreed to learn from video lecture, recorded version of broadcast TV lecture, "in the scheduled fixed time" rather than to learn "in free time" at the video study center. As a result of the present work it was found that for a distance teaching institution having broadcast TV lecture and their recorded version in video cassette as principal teaching material, either broadcast or recorded TV program when it was delivered at regular intervals could play an essential role in motivating and pace-making as well as carrying essential teaching material for student learning at a distance.

Keywords

distance teaching, learning process at a distance, broadcast TV lecture, recorded version of TV lecture, video study center, motivating, pace-making

INTRODUCTION

The University of the Air is a new University having been established in April 1983. It began enrolling students in 1985, and started the broadcasting of lectures in April of the year. The University is characterised by transmission of lectures through its own radio and TV broadcasting facilities. In 1990 the University is offering 196 courses. During fifteen weeks of each term, 2-credit courses broadcast 15 forty-five minutes lectures, and 4-credit courses broadcast 30 forty-five minutes lectures from 6 in the morning to 12 midnight, eighteen hours a day, from January 1 through December 31. Because the coverage of the broadcast is limited to the Kanto area at present, the University has opened recently a new

mode of study center, called "video study center" in non-broadcast areas which include Hokkaido, Hiroshima, Fukuoka and Okinawa. The video study centers began to accept students who enroll in a non-degree program in the second term of 1990. In the video study center, students can learn from recorded versions of broadcast lectures, watching video tapes or listening to audio tapes, principally in a scheduled fixed time, and gain academic credits by taking and passing examinations there.

As mentioned above, broadcast lecture and their recorded version in video and audio tape are placed in the major part of teaching materials in this institution among printed material, guidance by correspondence and classroom instruction. So student's learning process using them has been a matter of primary concern for the University.

Bates (1984) pointed out that "Universal access to broadcasting brings four major educational benefits to distance teaching system: (a) the programmes can carry essential teaching material; (b) broadcast programmes publicise the educational opportunities offered by a distance education system; (c) the programmes, by using the attractive and interesting forms of presentation common to TV production, increase motivation and interest in students who are otherwise generally working in isolation; (d) they add the cultural milieu by offering alternative programming for the general public."

Present investigation was concerned with student use of the broadcast TV lecture and its recorded version in video cassette. During the work in early stages of the University of the Air. It was observed that more than ninety-five percent of student watched TV lecture at home, that is, forty percent student watched on time, at their regularly scheduled broadcast time, and fifty percent watched video lecture. In addition, it has been recognized that student who used TV lecture "on time" had a high rate of successfully passing course and getting credit for them. The "on time" TV watching is thought to be effective on motivating and also pace making for student to learn at a distance.

Similar results were recently observed in the student's learning process using video lecture (recorded version of broadcast TV lecture in video cassette) at the experimental Hiroshima video study center of the University of the Air. Quite a few student showed preference for learning "in the scheduled fixed time" rather than for learning "in free time". Student appraised the learning "in the scheduled fixed time" to be effective in both motivating and pace making, just like watching broadcast TV lecture "on time" as already mentioned.

RESEARCH DETAILS

The learning behavior of student at TV lecture as observed during early stages (1987~1988) of the University of the Air.

Monitored students (136) dispersed in whole six study centers were interviewed to collect information for a questionnaire in small groups (five students in average) at the study center they belonged to. Twenty-eight interviews were held throughout the first and the second term 1987 and the first term 1988. Students profiles are shown in Table 1. Student's use and appraisal to TV lecture are summarized in Tables 2 and 3 respectively. as follows.

Table 1 MONITORED STUDENT'S PROFILES

			Total	136
	1987	78	1988	58
Numger of students	Male	42(44)	Male	24(47)
(Average age)	Female	36(44)	Fomale	34(43)
Regular student		70		57
Non-degree student(A)		5		0
Special student		3		1
Enrolled in	1985	36		30
	1986	17		6
	1987	25		6
	1988	0		16

Table 2 STUDENT USE OF TV LECTURES

Monitored students 136

Watch broadcast in the home	52(38%)
With record	15
Sometimes with record	26
No record	11
Video record broadcast in the home	65(48%)
View during the weekend	14
View during the day	13
View by the next week	10
View at any free time	10
View repeatedly	5
View just before exam	3
Others	10
Watch only at tape library in the study center	14(10%)
Never watch & record broadcast	3(2%)
Others	2(1.5%)

Table 3 STUDENT APPRAISEMENT OF THE TV LECTURE

Monitored students 44	
Arouses interest in subject	15(34%)
Motivates & pace-setting	10(23%)
Feels a sense of intimacy with & reliance on Professor	8(18%)

Useful to understanding textbook	2(5%)
Others	9(20%)

Effect of the use of TV lecture on student's records was monitored with thirty six first regular students;

A group (received credits more than 85) 12 (33%)

B group (received credits 46~85) 17 (47%)

C group (received credits less than 46) 7 (19%)

In order of the number of credits received for the second term 1988, attributes of 36 students together with learning process using TV lectures were summarized in Table 4.

Students classified in A group who could receive nearly ten credits on each term may have a good possibility of graduation from the University. It was noticed that A group students had a learning behavior of eagerly watching TV lectures "on time" compared with the other two B and C student groups.

Table 4 EFFECT OF THE USE OF TV LECTURES ON STUDENT'S RECORDS

A group

Credits	Sex	Age	Academic career	Use of TV lectures
110	F	36	High school	Watch & record broadcast
107	M	41	High school	Record
106	F	67	High school	Watch & record* broadcast
97	F	55	High school	Watch only at tape library
95	F	25	High school	Watch & record broadcast
92	F	55	High school	Record, view during the day
91	F	46	Junior college	Uncertain
90	M	37	High school	Watch & record broadcast
90	M	28	High school	Record, view during the week-end
89	M	31	Junior college	Record, view by the next week
88	F	43	High school	Watch & record** broadcast
87	F	50	High school	Watch & record broadcast

* voice only ** language only

B group

Credits	Sex	Age	Academic career	Use of TV lectures
83	M	45	High school	Record broadcast
83	F	36	Junior college	Watch broadcast
81	F	41	Junior college	Record, view in the evening
79	M	48	High school	Record, view by the next week
78	F	42	Junior college	Record broadcast
74	M	51	High school	Record, view on holiday
73	M	40	High school	Record, view by the next week
70	F	37	Junior college	Record broadcast
66	M	66	High school	Record, view about a half
66	F	54	Junior college	Record broadcast
63	M	23	High school	Record, view repeatedly
63	F	52	High school	Watch broadcast (in principle)
62	F	45	High school	Record broadcast
58	M	32	High school	Record broadcast about a half
57	M	62	Junior college	Record, view just before exam
56	M	42	High school	Record, view during the weekend
54	F	53	High school	Watch & record broadcast

C group

Credits	Sex	Age	Academic career	Use of TV lectures
45	F	52	High school	Watch broadcast in the evening
45	M	23	High school	Record, view during the day or weekend
43	F	54	Junior college	Record, view during the day (in principle)
43	M	36	University	Record, view during the day (in principle)
41	F	63	University	Record, view during the day (in principle)
37	F	24	University	Record, seldom view
24	M	58	High school	Watch only a half at tape library

Researches for the learning process using video lectures at the video study center were concerned with a joint research project of this institute in cooperation with the University of the Air and Hiroshima University carried out in 1989.

A video study center was set up experimentally in Senda campus of the Hiroshima University. It consisted of a lecture room equipped with fifteen AV booths and shelves of the University of the Air video lectures. Monitored students (375 for the first term) were able to come to the study center to watch video lectures, either "in the scheduled fixed time" for ten booths or "in free time" for five booths. In the first term, seven subjects having fifteen video

lectures of forty-five minutes each were presented in the scheduled fixed time so as to do the same lecture once a day for a week during a whole fifteen weeks. In the second term, however, fifty subjects were presented so as to have an individual lecture once or twice a week using the same facilities. Monitored students had to be registered for the fixed time in the case of watching "in the scheduled fix time" because of the limited number of booths. In the course of fifteen weeks learning from video lecture, there were tutorials five times on each subject at three week intervals.

Number of monitored student (first term 1989)	
Writing of Poetry	53
Development and spread of Culture	57
Japanese Economy, Industry and Business Enterprises	59
Nature in Japan	28
English IV	91
Food Science	59
Learning and Counseling	28
Total	375

The total student attendance through fifteen weeks experimental period is shown in Figure 1 below.

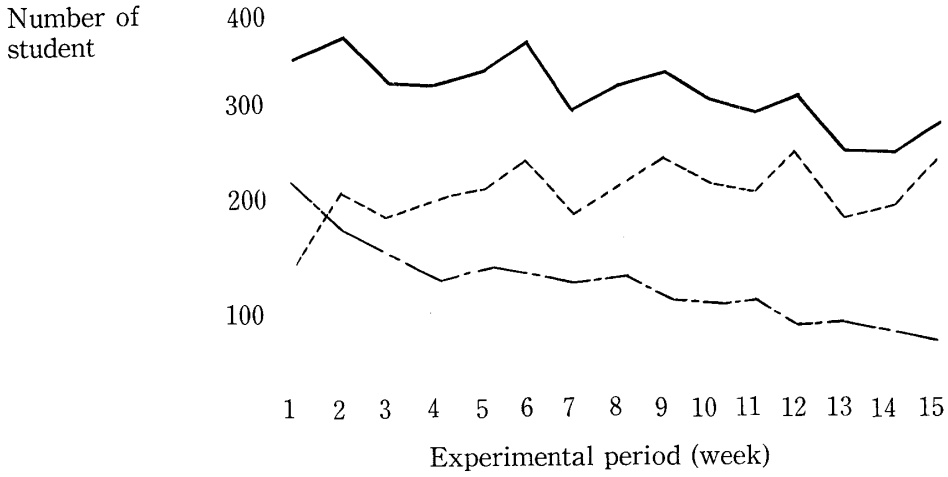

Figure 1 STUDENT ATTENDANCE THROUGHOUT FIFTEEN WEEKS

Student's evaluation with regard to experimental learning by the use of video lecture at the video study center was quite affirmative as shown in Figures 2 & 3.

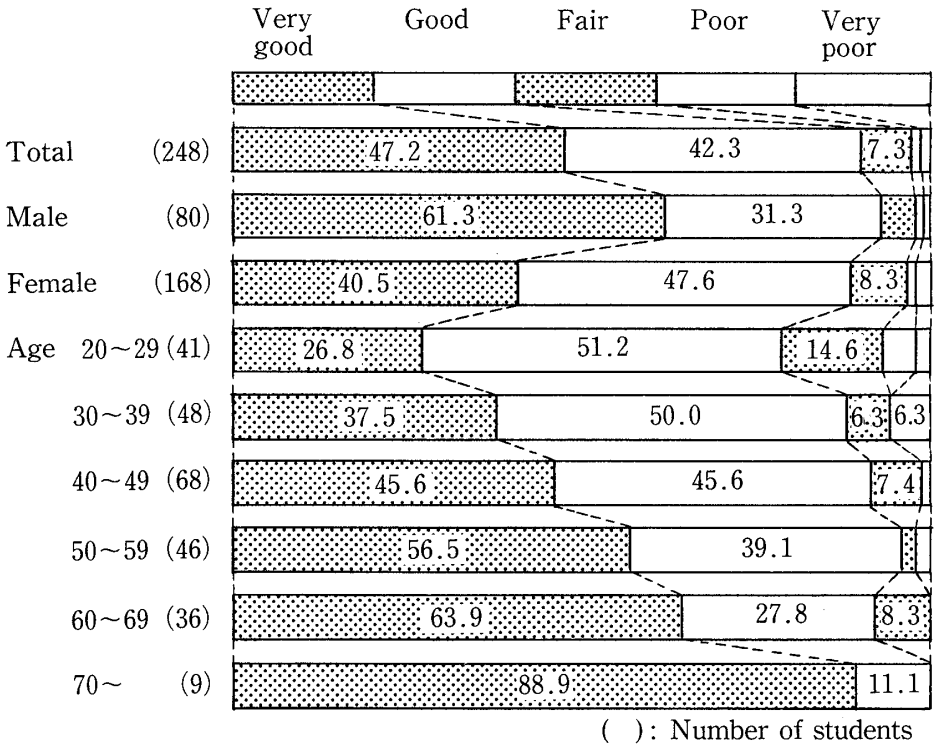

Figure 2 MEETING OF MONITORED STUDENT'S EXPECTATION (%)

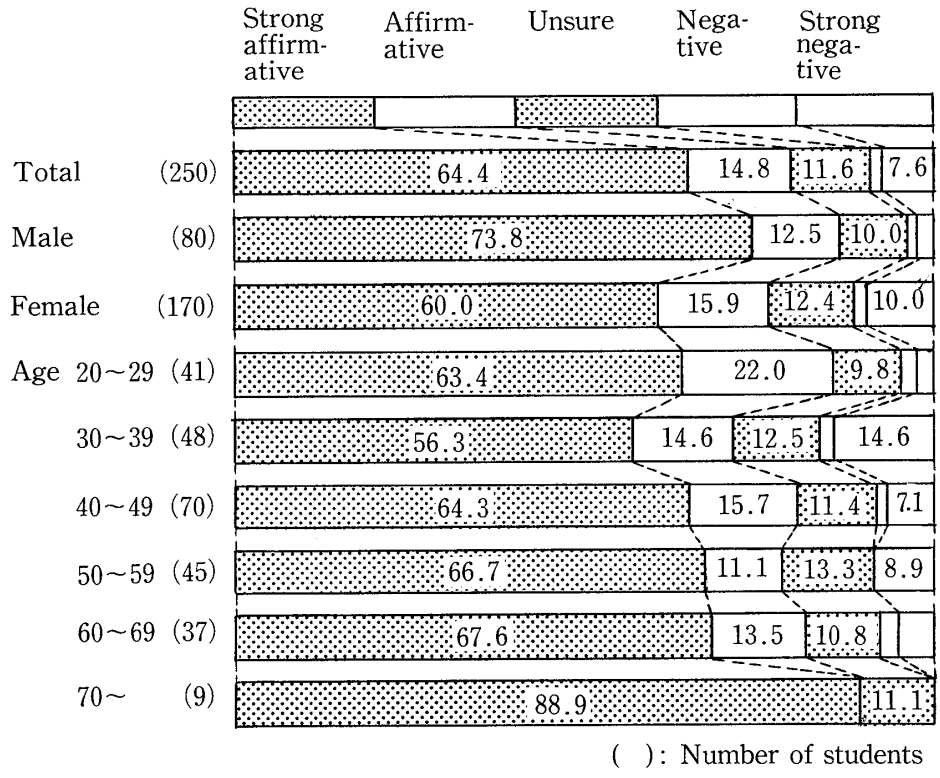

Figure 3 CONTINUATION TO THE NEXT TERM

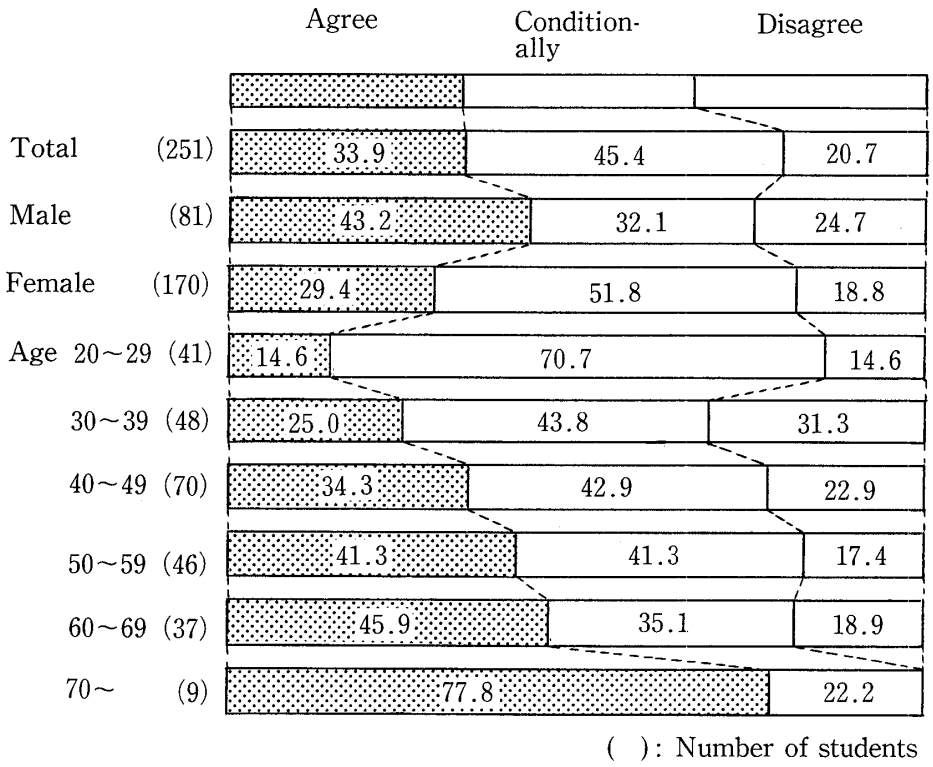

Figure 4 STUDENT'S ATTITUDE TO LEARNING PROCESS USING VIDEO LECTURES "IN THE SCHEDULED FIXED TIME" (WITH EACH AGE GROUP)

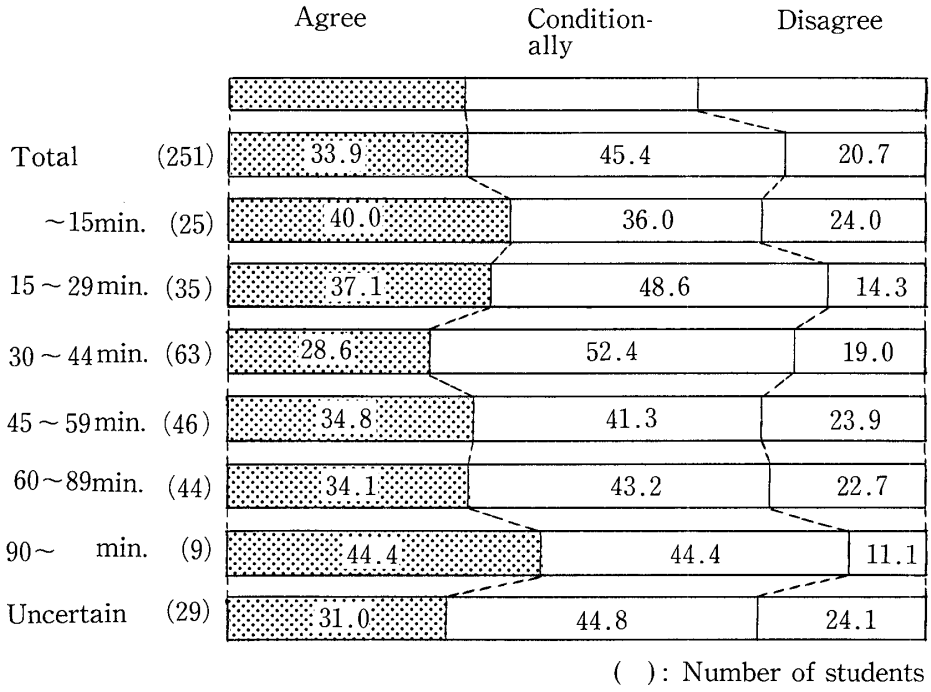

Figure 5 STUDENT'S ATTITUDE TO LEARNING PROCESS USING VIDEO LECTURES "IN THE SCHDULED FIXED TIME" (WITH EACH TIME TO GET TO STUDY CENTER)

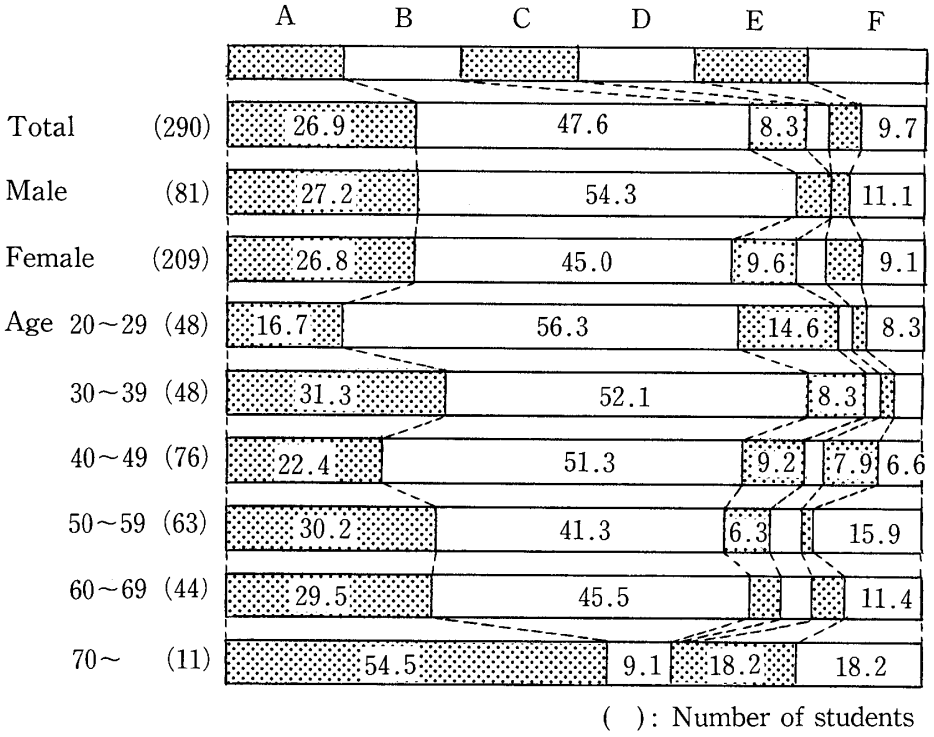

Figure 6 THE REASON WHY STUDENT AGREED TO USE VIDEO LECTURE "IN THE SCHEDULED FIXED TIME"

A: Learning intensively
B: Motivating and pace paking
C: Learning together with company as a stimulus in the same room
D: Talking with company about the content to deepen understanding after the program finished
E: Having an opportunity to make friend
F: Others

The reasons why student agreed to use video lecture "in the scheduled fixed time" were summarized in Figure 6 based on midterm (during the seventeenth week) student's questionnaire.

CONCLUSION

In the course of the present work, it has been clarified that TV lectures and their recorded version in video cassette are quite effective in motivating and pace-making for students learning at a distance. It is particularly impressive that the student who wants to continue learning, wishes to have the stimulus of watching video lecture in a scheduled fixed time, rather than watching in free time, which would be preferred by the general public in the present age. In conclusion, for distance teaching institution which has broadcast TV lecture and its recorded version in video cassette as principal teaching material, either broadcast or recorded TV program when it is delivered at regular intervals

could play an essential role in motivating and pace-making as well as of carrying essential teaching material for students learning at a distance.

Acknowledgement

The author wishes to express his thanks to Mr. Kazuhisa Tashiro and Mr. Mamoru Sudo, Associate professors of this Institute, for their helpful collaboration.

References

Bates, A.W. (ed.), The Role of Technology in Distance Education, St. Martin's, Croom Helm, 1984.

(Professor of the Research and Development Division)