

A Pilot Study to Search for Possibilities in English Study using Cellular Phones with Multimedia Function

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1. Purposes

1. Meet the needs of Japanese students
2. Develop a new curriculum of E-learning for students

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1-1 Meet the needs of Japanese students

1. English is necessary not only for communication but for job hunting.
2. High TOEIC (test of English for International Communication) score is important to attain a successful career plan.
3. An effective TOEIC study curriculum is needed for students.

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1-2 Develop a new project of E-learning for students

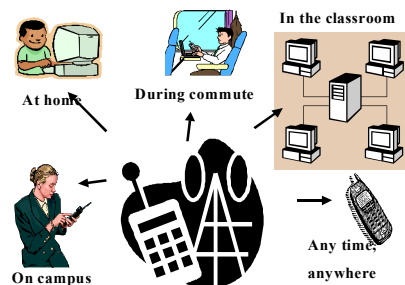
- ① Virtual University type
- ② Blended type
- ③ Transformative type
 - Integrated use of Website, Cyber Campus System (campus learning network system) & cellular phones

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Figure 1 Transformative type of e-learning system

Integrated use of Website, Campus Learning Network System, & cell phones



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2. Background of the project

Working group of mobile learning for English study at Aoyama Gakuin University, Japan.

- First project 2002-2003
- Second project 2004-2005

Take advantages of students'

- learning style
- life style
- learning preference

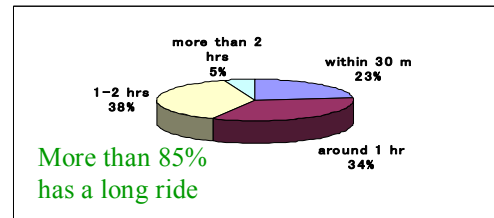
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2. 1 Use spare time effectively

Figure 2 How long does it take to get to the university?

N=89

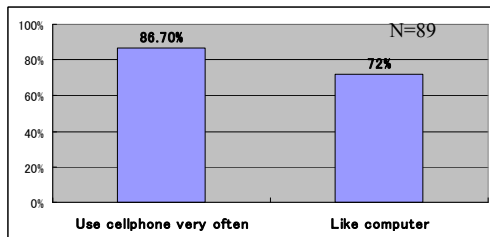


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2.2 Use cell phones & computers effectively

Figure 3 How do you like cell phones and computers?

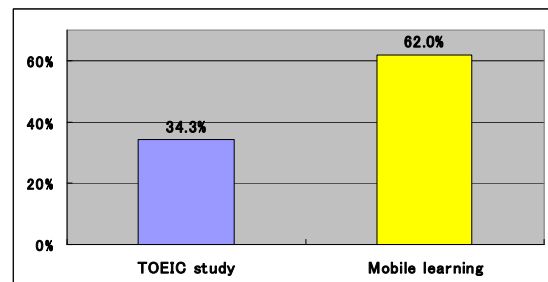


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2.3 Use students' interest effectively

Figure 4 What interests you about e-learning project?



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3. First project:

3.1 Study TOEIC by computers and cell phones

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Figure 5

Cell phone screen

-first page



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Figure 6

Cell phone screen
-Contents



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Figure 7

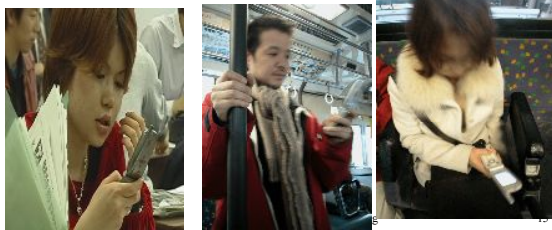
Cell phone screen
-Question & answers



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3.2 Students' Learning style has changed by mobile learning

Figure 8 Studying by cell phones between classes, on the train, and while waiting for a friend

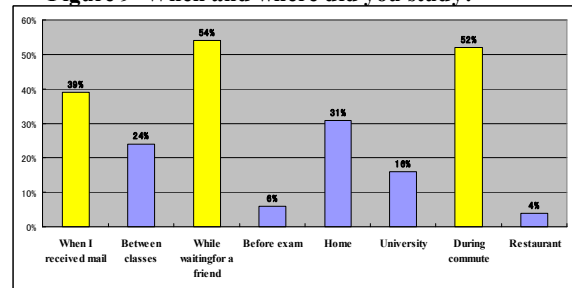


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3. First Project:

Learning Style—Using free time efficiently

Figure 9 When and where did you study?



Source: Tamaki K., Obari, T., Kimura, M., Potvin, C. 2003

3. First Project:

Test score improved

T-test result showed a significant difference between pre-test and post-test ($p < 0.0001$)

Figure 10 TOEIC test score

	N	Mean Full mark=50	S.D.	Correlation	Sig.
Pre-test	41	29.44	6.697	.579	.000
Post-test	41	32.61	8.479		

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4. Second Project

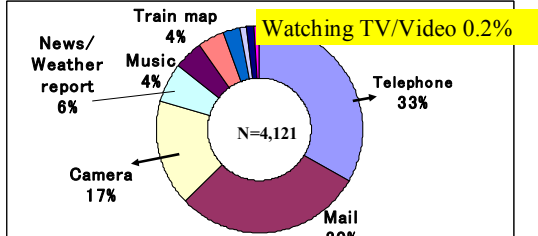
English Study using Cellular Phones
for watching video

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4. Second Project: Watching video

Figure 11 Main Usage of Cell Phones



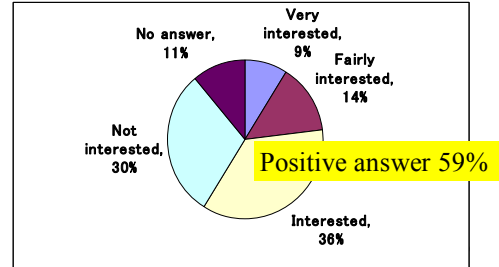
Source: NTT Docomo, Japan, 2004 & Nippon Economic Journal, May, 2005

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5.1 Students' responses (1)

Figure 14 What do you think about studying video news clip by cell phones N=412



4. Study world news by computers and cell phones



News Source: ABC World News from a textbook, Kinsei-do, Japan

4. Second Project:(1)

Figure 12 Watching news clip by a cell phone and answering questions on the computer



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4. Second Project: (2)

Figure 13 Listening to the news by a cell phone and answering questions on the computer



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5. Results

1. Students' responses
2. Vocabulary listening test

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5.1 Students' Responses (1)

Advantages of studying news video clip by cell phones

1. Good time management
 - Can study anywhere, any time
2. Convenient tool
 - Easy to handle & carry
 - Multiple functions
3. Fun

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5.1 Students' Responses (2)

Disadvantages of studying news video clip by cell phones

1. Expensive telephone bill
2. Limitation as a study tool
 - Requires big volume of battery
 - Small window
 - Limited file size
3. The number of owners of cell phone with camera capabilities (FOMA) was limited

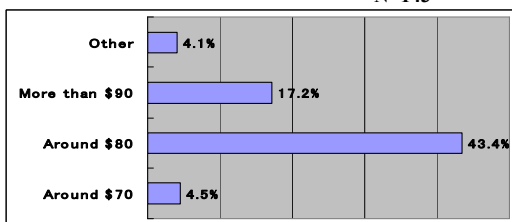
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5.1 Students' responses (3)

Figure 16 Average telephone bills/month

N=143



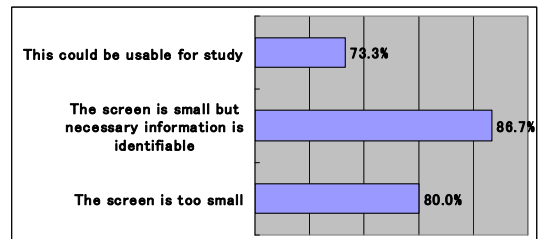
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5.1 Students' responses (4)

Figure 15 What do you think of the visual image of the cell phone?

N=17



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5.2 Test Result

- Vocabulary Test (Full mark = 40)
- Score improved in 1 week

Figure 17 Vocabulary test by listening N=17

	Mean	T-test
Pre-test	18	.026*
Post-test	21.98	

*P<.05

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6. Conclusion

1. **Mobile learning (Transformative e-learning system) met the needs of Japanese students.**
 - Changed students' lifestyle and learning style in a better way.
 - Study with computers in class and review by cell phones whenever and wherever they like.
2. **TOEIC study and video clip study by cellular phones are added in our new curriculum**
 - Cell phones are good for a small quiz style questions.
 - Video clip study on cell phones enhances listening ability.

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Thank you very much for your
listening.