

# Medical students' needs and readiness for e-learning: Survey results at Shimane University, Japan



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## Abstract

Japanese medical professionals are increasingly using English when presenting papers at conferences and communicating with medical staff and patients. Since 2008, the authors have been trying to improve overall impact of their medical English lessons at Shimane University, Japan, by the efficient use of e-learning (Iwata, Tamaki & Clayton, 2011). At the same time, the authors have been conducting surveys to investigate their students' needs and readiness for e-learning as these are crucial prerequisites for successful implementation of e-learning (Govindasamy, 2001).

Results from 5-year-long surveys on students' needs for e-learning show that most of the medical students prefer to use computers or the Internet for their English study. Results on computer competence to investigate students' technical readiness for e-learning show that a majority of students are confident and competent in storing information on computer or disk and searching for information using a Web browser. However, student's technical knowledge was rather weak with a significant number of them feeling uncomfortable and incompetent when trying to reconnect to the internet after being disconnected and when an error message occurs. This indicates that the provision of on-going technical support could be regarded as a crucial service to enable continuing success of learners in an e-learning environment.

## 1. Research Aims & Methods

### Aims:

- To investigate medical students' needs and readiness for e-learning
- To identify prerequisites for students' successful e-learning

### Duration:

- 2008 - present

### Measurement technique:

- Anonymous questionnaire for students using Moodle (Questionnaire Module),
- scale\*: 1 (Not at all) - 5 (Very much)
- To statistically analyze the data

## 2. Survey Results 1: Students' Needs for e-learning

### Survey target

- 1<sup>st</sup>-year medical students at Shimane University, Japan

### Q1. Which materials do you like to use for your English study?

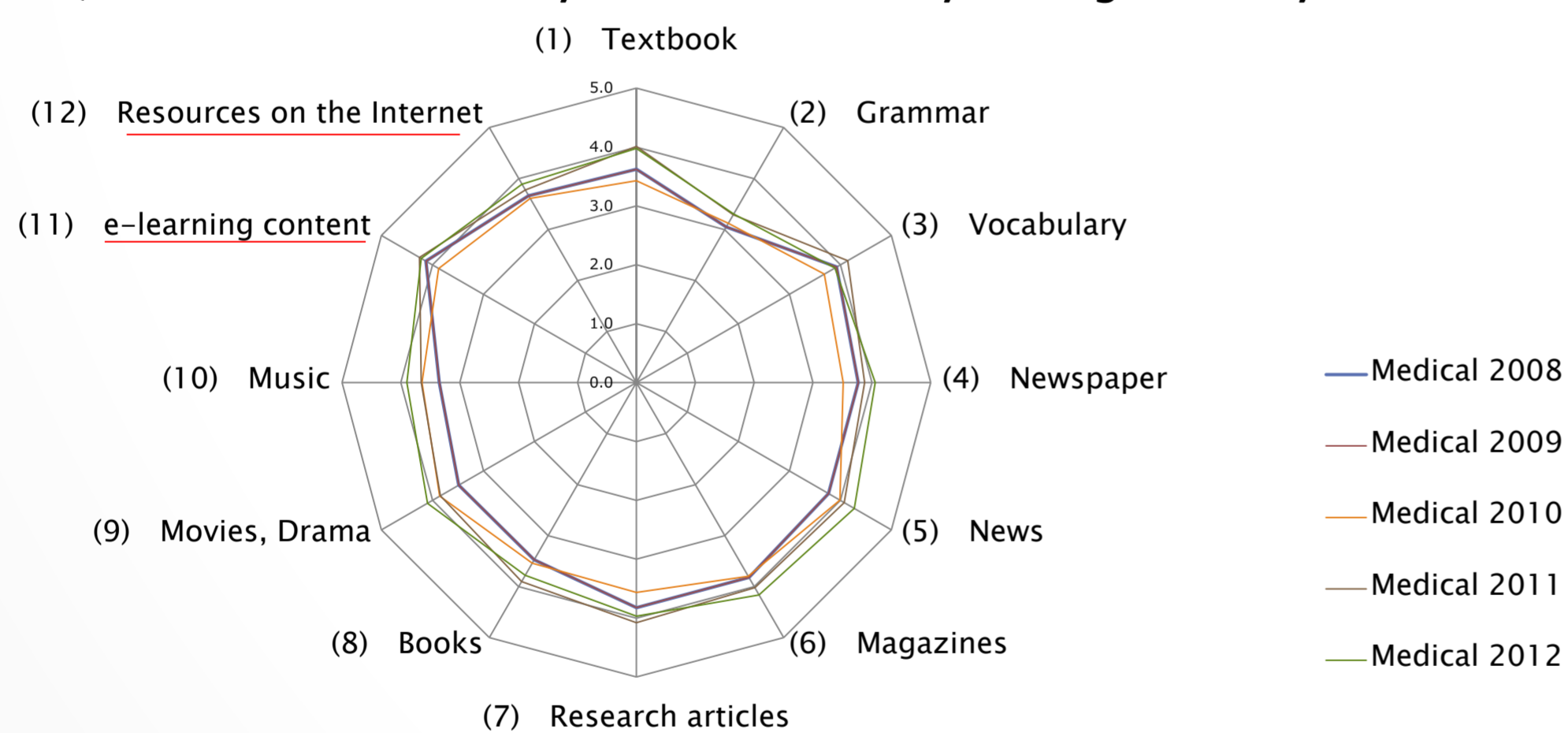


Figure 1. Radar chart showing average scores (study materials)

### Q2. Which tools do you like to use for English study?

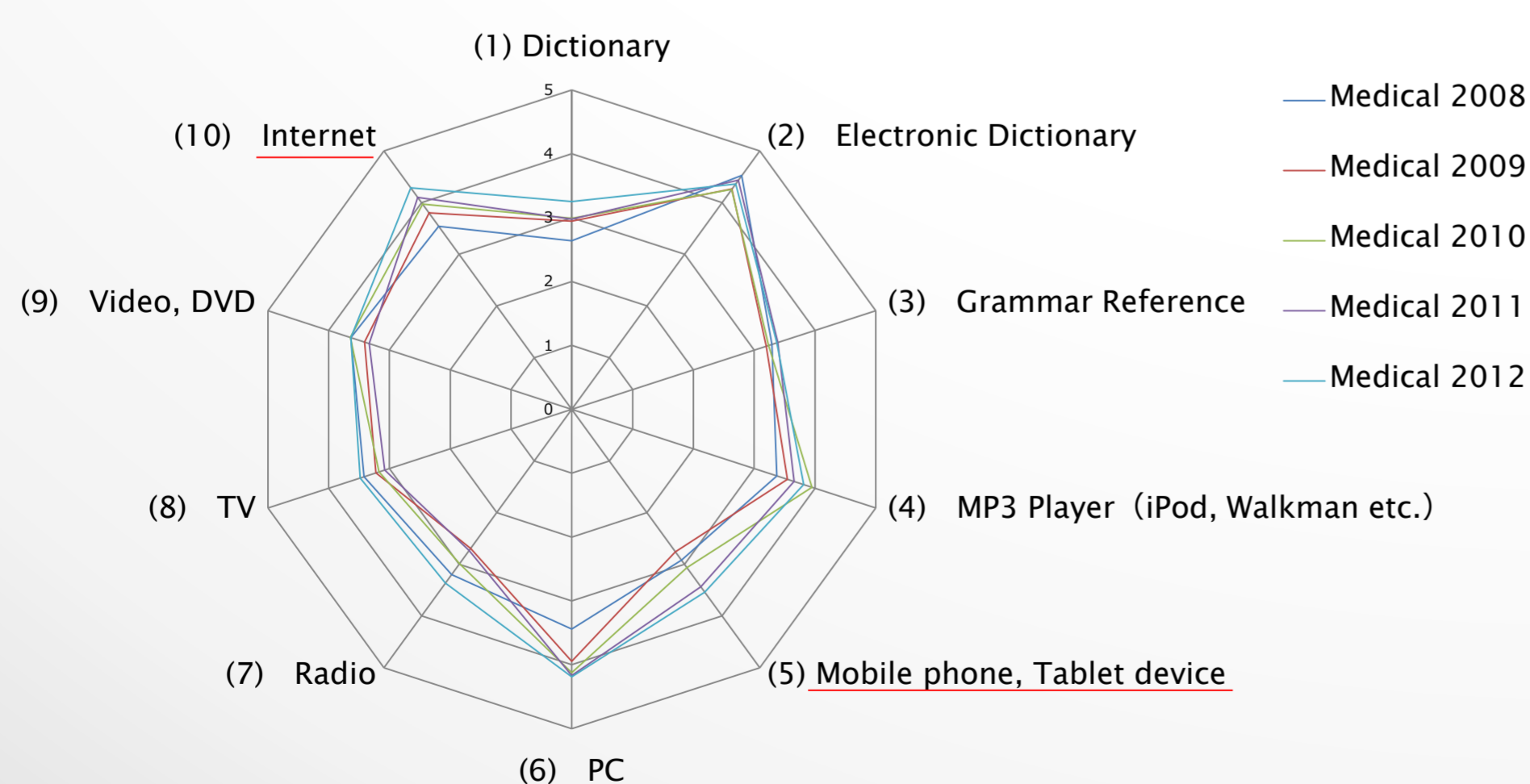


Figure 2. Radar chart showing average scores (tools)

Table 1. Correlation coefficients between items (n=96, April 2013)

Tools you would like to use for your English study	Activities you like to do in English class				
	More opportunities to speak out	More assignments	Short quizzes for review	Pair/Group work	More use of multimedia
(1) e-learning	.20	.15	.38	.32	.40
(2) Internet resources	.22	.12	.23	.25	.40
(3) MP3 Player	.24	.21	.37	.34	.56
(4) Mobile phone/ Tablet devices	.37	.16	.23	.29	.47

## 3. Survey Results 2: Students' readiness for e-learning

### Survey target

- 1<sup>st</sup>-year medical students

Table 2. Instrument for investigating students' technical readiness

Scale	Description	ID	Items
Computer Competence (CC)	How is the student engaged with digitally stored information and how do they relate to the information presented?	CC1	I am confident and competent using a computer.
		CC2	I am confident in using the World Wide Web to search for information.
		CC3	I am confident in using a web-browser tool bar (back, forward, home, and search).
		CC4	I am able to reconnect to the network if anything goes wrong.
		CC5	I know what to do if a computer 'error message' occurs during my learning.
		CC6	If necessary, I can electronically store information on my computer or disk.

Table 3. Percentages of positive feedback (3-5 survey score)

ID	2009	2010	2011	2012	Mean
CC1	59.1%	48.9%	69.4%	60.4%	59.2%
CC2	61.3%	48.9%	68.2%	62.5%	60.1%
CC3	57.0%	48.9%	68.2%	59.4%	58.2%
CC4	44.1%	39.4%	51.8%	41.7%	44.0%
CC5	43.0%	43.6%	52.9%	40.6%	44.8%
CC6	80.6%	73.4%	87.1%	71.9%	78.0%

## 4. Discussion

(1) A 5-year-long survey on medical students' needs analysis revealed that their preference for learning materials and tools for their English study followed almost the same pattern each year. It also showed that the students expectations for the use of e-learning tools are very high. The correlation coefficients between some question items demonstrated that students who are interested in e-learning would have appreciated greater use of short quizzes and/or multimedia tools in class.

(2) When analyzing the data shown in Table 3, it was found a majority (78.0%) of students were confident and competent in storing information on computer or disk. However, student's technical knowledge was rather weak with a significant number of them feeling uncomfortable and incompetent when trying to reconnect to the internet when disconnected and when an error message occurs.

## 5. Conclusions

Investigating students' needs and readiness for e-learning is crucial for teachers if they want to successfully implement cutting-edge e-learning techniques. Provision of on-going technical support is regarded as a crucial service to enable continuing success of learners in CALL environment.

## References:

Iwata, J., Tamaki, Y., Clayton, J. (2011). Integrating Moodle-based Activities into Teaching English for Medicine: Instructional Design and Students' Perceptions, G. Weir., et. all (ed) Corpora and Language Technologies in Teaching, Learning and Research, University of Strathclyde Publishing, 39-49.

Thavamalar Govindasamy (2001). Successful implementation of e-Learning: Pedagogical considerations, The Internet and Higher Education, Volume 4, Issues 3-4, s 287-299.