

Report on a Survey of Faculty Computer Knowledge

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教育者のコンピュータ知識調査の結果

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Abstract

This paper reports on a survey of computer knowledge by 54 educators. Teachers were surveyed as to their knowledge of various aspects of computer use, including basic terms and software use, in order to assess the current level of computer knowledge. Results indicate that while most teachers have some experience with computers, fully 35% consider their skill level to be poor or non-existent. Additional training in various aspects of computers in education is suggested by the survey.

Key words: CALL, computer skills, IT (information technology), education

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抄 録

本稿では、教育者のコンピュータ知識に関する調査の結果を報告する。教員を対象にして、コンピュータ知識の現在のレベルを測るために、基本的な用語やソフトウェアの使用など、コンピュータに関する様々な知識について、調査を行った。その結果、ほとんどの教師がコンピュータを使用したことがある一方で、35%強が自分のコンピュータスキルのレベルは低い、あるいはスキルがない、と考えていることがわかった。教育におけるコンピュータの使用には更なるトレーニングが必要であることが、この調査から見えてくる。

キーワード: CALL、コンピュータスキル、IT (情報技術)、教育

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Introduction

Computer labs and CALL (Computer-Assisted Language Learning) serve much the same function in the 21st century as language laboratories and the LRCs (Learning Resource Centers) did in the 1960s and 1970s, positive indications of the use of technological advances within the institutions. Unfortunately, as Ruthven-Stuart points out, though many teachers have positive attitudes toward CALL, few teachers are active CALL practitioners (2003). Ruthven-Stuart identifies five factors that contribute to the “persistence of the ‘IT-gulf’” in language education (2003, p.11): misconceptions, commercialism, technology, structural contexts, and teaching contexts. Ruthven-Stuart considers ‘misconceptions’ to be the hype that creates “unrealistic expectations” (p.11), ‘commercialism’ to be the push by businesses to place computers in schools, ‘technology’ to be the lack of knowledge and skills in using the technology, ‘structural contexts’ to be institutional impediments, and ‘teaching context’ to be the change in teaching styles that are needed for teachers to actually use the technology effectively (2003). The first two factors are responsible for creating the gulf (Ruthven-Stuart, 2003), while the last three are those educators and institutions need to address.

The immediate need to address this gulf is clear when the policies of the Japanese Ministry of Education, Culture, Sports, Science and Technology’s (MEXT) decision to fully implement programs that will enable all classes at the secondary level to use computers by the 2005 school year (Japanese Ministry of Education, Culture, Sports, Science and Technology, n.d.). The goal is for classes at all levels to use the available technology fully within the next few years. In order to do this, the factors identified by Ruthven-Stuart need to be addressed.

Of these, the lack of understanding of the technology by teachers is an immediate concern at any institution that wants available information technology fully utilized within the educational environment. Only after this has been addressed can the structural impediments be overcome and teachers begin the five-to six-year process that Healy maintains are required for teachers to fully make use of computers in their classrooms (1999).

These concerns reflected those felt within Osaka Jogakuin College. In order to assess the current knowledge of the faculty, the Media Education Development Committee surveyed both full-time and part-time instructors regarding their computer skills in November 2003. This paper reports on the results of that survey and provides an assessment of the knowledge and skills of the OJC faculty.

The Study

Instrument and Subjects

In October, 2003 the Media Education and Development Committee members¹ submitted possible survey questions for a survey of faculty regarding their computer knowledge. I then compiled and edited the questions, selecting those which seemed most appropriate to obtain the information we wanted regarding current levels of computer skills. This English-language version of the survey was reviewed and agreed to by the committee. To ensure that all teachers fully understood the questionnaire, it was translated into Japanese².

Copies of the questionnaire were then given to all faculty members, with native-speakers of Japanese receiving the version in Japanese³, and native speakers of other languages (English, Spanish, French, etc.) receiving the English version (see Appendix A). A total of 75 questionnaires were distributed (54 in Japanese, 21 in English).

Results

A total of 54 surveys were returned by the deadline (39 in Japanese, 15 in English), a 72% response rate. I then tabulated and analyzed⁴ these results to determine the current state of computer knowledge within the OJC faculty. (See Appendix B for complete survey results.)

According to the survey, only seven of the 54 respondents rated their skills using computers as excellent (Q3), far fewer than the 19 faculty members (35% of respondents) who rated themselves as poor or having no skills at all with computers. Fully 40% of the faculty said they had limited or no Internet computer connection at home (Q5), hinting at few opportunities to gain the skills they need with computers, 41% had not used e-mail with students (Q8d), 54% had never developed a webpage (Q9f), 46% did not maintain student records on computers (Q10), and most indicated they were unfamiliar or uncomfortable with features of standard software packages (Qs10-15).

Fortunately, few felt that they were total novices with e-mail (Q8a) and most accessed the Internet regularly (Q9a). More importantly, most faculty members are interested in learning more about computers and have identified areas they are interested in learning more about (Qs16 and 16b).

In short, faculty members assessed their own computer skills and knowledge by to be at a novice to mid-level.

Discussion and Conclusions

First, the generally low-level of computer knowledge among the entire faculty indicates that basic computer training is an immediate necessity. Given that Healy (1999) sees a five-

to six-year period of using IT as a necessary condition for teachers to fully adopt CALL in their classrooms, this is a pressing concern.

Fortunately, there is also a great deal of interest in CALL among the faculty and a generally positive attitude toward IT use to enhance education. Given the proliferation of CALL opportunities available for students, as well as OJC's move to incorporate e-learning as a component of the educational environment, this is encouraging. However, given that other surveys have found that many teachers profess a desire to use CALL but few actually do so (Japanese Ministry of Education, 2002, cited in Ruthven-Stuart, 2003), care must be taken to nurture this interest and provide positive opportunities for computer skills training to faculty.

In this light, computer training needs to be an on-going concern at all institutions of higher education. Several types of workshops are suggested by this survey, including training with standard spreadsheet software packages for grading and data analysis and work with presentation software as a teaching tool. In addition, some workshops should be arranged by ability level to enable novices to progress and advanced users to focus on areas they see a particular need for. Opportunities to both attend workshops on specific programs as well as at a variety of levels (novice to experienced) need to be available to faculty members. Given the increasing emphasis on using CALL to add to the educational experience, in both language classes and other disciplines, this needs to be a priority for Japanese institutions at all levels, from elementary school through universities.

Computers are not going to go away. They are here, and just like language labs, they are here to stay. In order to prevent computers from becoming glorified typewriters or Internet search engines, and to make sure that they add to the educational environment rather than detracting from it efforts must be made to bridge the IT-gulf. This will take a concerted effort on the part of administrators as well as educators to overcome the factors that contribute to this gulf.

Notes

- 1 This survey was developed by the Media Education Development Committee in October, 2003. Committee members were M. Aljets, D. Bramley, T. Chihara, S. Cornwell, E. Kato, S. Hashimoto, H. Mabuchi, T. Swenson (chair), and R. Tanaka.
- 2 The translation of the questionnaire into Japanese was done by R. Tanaka and T. Swenson.
- 3 A copy of the questionnaire in Japanese can be obtained upon request.
- 4 Results were analyzed by T. Swenson and reported to the OJC Faculty on March 23, 2004.

References

- Healy, J. M. (1999). *Failure to connect*. New York: Touchstone.
- Japanese Ministry of Education, Culture, Sports, Science and Technology. (n.d.). Major policies (elementary and secondary education). Retrieved August 1,2004, from <http://www.mext.go.jp/english/org/eshisaku/eshotou.htm>
- Ruthven-Stuart, R. (2003). The IT-gulf vs. global effects. In P. Lewis, C. Imai, & K. Kitao (Eds.), *Local decisions, global effects* (pp.9–14). Iizuka, Japan: JALT CALL SIG.

Appendix A: English Version of Questionnaire

Dear Faculty Member

We would like to assess teachers' current computer use and hope you will cooperate by completing the following questionnaire. It should take about 10 minutes. We thank you for your cooperation.

Respectfully, Tamara Swenson, Media Education Development Committee Chair

General Information

1.	How many years have you been involved in teaching?	1-5	6-10	11-20	20+
2.	Which courses do you teach at Osaka Jogakuin College? (Please list all)				

General Computer Use

3.	How would you rate your overall computer skills? (0=Nil&3=Excellent)	0	1	2	3
4.	Which type of computer do you use?	None	Mac	PC	UNIX
5.	What type of internet connection do you have at home?	None	Modem	High speed	
6.	Do you understand the following terms:				
	RAM	No	Yes	Unsure	
	Hard drive	No	Yes	Unsure	
	Browser	No	Yes	Unsure	
	World Wide Web	No	Yes	Unsure	
	URL	No	Yes	Unsure	
	USB	No	Yes	Unsure	
	Listserv	No	Yes	Unsure	
	Webpage	No	Yes	Unsure	

Home Computer Use

7.	If you have access to a computer at home, which of the following hardware/peripherals are available on it?				
	Inkjet printer	No	Yes	Unsure	
	Laser printer	No	Yes	Unsure	
	Scanner	No	Yes	Unsure	
	CD ROM drive	No	Yes	Unsure	
	CD RW drive	No	Yes	Unsure	
	DVD drive	No	Yes	Unsure	
	Internet access	No	Yes	Unsure	
	Digital camera	No	Yes	Unsure	

E-Mail Use

8.	When it comes to using e-mail, I ...				
	Am or feel like a total novice	No	Yes		
	Use e-mail to communicate with friends, family and colleagues	No	Yes		
	Use e-mail to access professional information from listservs	No	Yes		
	Have planned collaborative e-mail activities for my students	No	Yes		
	Know how to open attached files	No	Yes		
	Use e-mail as an integral part of my life	No	Yes		

Internet Use

9a.	On average, how often do you access the WWW?	Nil	rarely	weekly	daily
9b.	Have you used a search engine to retrieve information on the WWW?	No	Yes	Unsure	
9c.	Have you used the WWW to retrieve information for a course you have taught or your own research?	No	Yes	Unsure	
9d.	Have you downloaded documents or software from the WWW?	No	Yes	Unsure	
9e.	Have you used a username and password to connect to a website?	No	Yes	Unsure	
9f.	Have you ever developed a webpage?	No	Yes	Unsure	

Spreadsheet or grading Software Use

10.	Do you keep students' grades in a computer and prepare their final grade using a grading software or spreadsheet?	No	Yes	Unsure	
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If "yes," what software do you use?

11.	Please rate your experience/knowledge in the following by circling a number where 0=Nil and 3=Excellent				
	Creating tables and charts	0	1	2	3
	Organizing data and analyzing the information	0	1	2	3
	Using and writing formulas	0	1	2	3

Word Processing

12.	Have you used a word processing software package?	No	Yes	Unsure	
	If "yes," what software do you use?				
13.	Please rate your experience/knowledge in the following by circling a number where 0=Nil and 3=Excellent				
	Using bullets and numbering	0	1	2	3
	Changing paragraph formatting and page margins and orientation	0	1	2	3
	Using styles	0	1	2	3
	Creating a Table of Contents by using heading styles	0	1	2	3
	Adding Headers and Footers, page numbers	0	1	2	3

Presentation Software

14.	Have you used presentation software package?	No	Yes	Unsure	
	If "yes," what software do you use?				
15.	Please rate your experience/knowledge in the following by circling a number where 0=Nil and 3=Excellent				
	Using templates and creating slides	0	1	2	3
	Importing graphic elements	0	1	2	3
	Preparing sound segments or video segments	0	1	2	3

Workshops

16.	Are you interested in attending workshops on computer use?	No	Yes	Unsure	
	If "yes," what types of workshops would you appreciate?				
	If "no" or "unsure," why not?				

Please return completed questionnaires to T. Swenson by Saturday, November 22, 2003.

Swenson : Report on a Survey of Faculty Computer Knowledge

Appendix B: Complete Survey Results

Total # of questionnaires returned=54	#	#	#	#
1. Years teaching? (1=1-5, 2=6-10, 3=11-20, 4=20+)	1-5yrs 19	6-10yrs 12	11-20yrs 12	20+yrs 10
2. Courses at OJC				
3. Computer skills? (0=Nil/?&3=Excellent)	Nil = 6	13	28	7 Excellent
4. computer? (more than one system possible)	None 1	Mac 43	PC 66	
5. Internet? (0=none, 1=modem, 2=high speed)	none 2	modem 20	high 28	
6a. RAM	No 15	Yes 39		
6b. Hard drive	No 7	Yes 47		
6c. Browser	No 6	Yes 47		
6d. World Wide Web	No 1	Yes 53		
6e. URL	No 7	Yes 47		
6f. USB	No 13	Yes 41		
6g. Listserv	No 32	Yes 22		59% No
6h. Webpage	No 5	Yes 49		
7a. Inkjet printer	No 5	Yes 49		
7b. Laser printer	No 43	Yes 11		
7c. Scanner	No 33	Yes 21		
7d. CD ROM drive	No 3	Yes 51		
7e. CD RW drive	No 22	Yes 32		
7f. DVD drive	No 29	Yes 25		
7g. Internet access	No 4	Yes 50		
7h. Digital camera	No 24	Yes 30		
8a. total novice	No 49	Yes 5		
8b. communicate with friends, etc.	No 3	Yes 51		
8c. access professional listservs	No 26	Yes 28		48% No
8d. planned e-mail activities for students	No 22	Yes 32		41% No
8e. open attached files	No 2	Yes 52		
8f. integral part of my life	No 1	Yes 53		
9a. Access WWW? (0=Nil/1rarely/2weekly/3daily)	Nil 3	rarely 5	weekly 5	daily 41
9b. Used a search engine?	No 5	Yes 49		
9c. Used to retrieve course information?	No 5	Yes 49		
9d. Downloaded documents or software?	No 4	Yes 50		
9e. Used a username/password?	No 6	Yes 48		
9f. Developed a webpage?	No 29	Yes 25		54% No
10. Keep/prepare grades software/spreadsheet?	No 25	Yes 29		46% No
10b. If "yes," what software do you use?				
11a. Create tables and charts	None 8	20	52% 15	11 Excellent
11b. Organizing/analyzing data	None 17	18	65% 11	8 Excellent
11c. Using and writing formulas	None 21	16	69% 9	8 Excellent
12. Used a word processing software package?	No 1	Yes 53		
12b. If "yes," what software do you use?				
13a. Using bullets and numbering	None 4	6	19% 25	19 Excellent
13b. format, page margins, orientation	None 3	4	13% 23	24 Excellent
13c. Using styles	None 4	10	26% 25	15 Excellent
13d. Table of Contents using styles	None 12	19	57% 10	13 Excellent
13e. Headers/Footers, page numbers	None 6	8	26% 20	20 Excellent
14. Have you used presentation software package?	No 21	Yes 31		
14b. If "yes," what software do you use?				
15a. Using templates and creating slides	None 23	6	54% 16	9 Excellent
15b. Importing graphic elements	None 20	8	52% 14	12 Excellent
15c. sound or video segments	None 29	13	78% 5	7 Excellent
16. Attending workshops?	No 15	Yes 30	Unsure 9	

presentation=11; html-web pages-8; class use=7; any-6; data manipulation=4; voice-movie=3; testing=2; graphics=1

16c. If "no" or "unsure," why not?

no time=3; not needed=3; not interested=3; wait to see=3; no computer=1