A Look at First-Year Students' English Typing Abilities

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Introduction

College and university EFL educators in Japan are well aware of the ubiquitous role that computers play at the post-secondary level today. In many ways, Japan stands at the forefront of integrating computer-assisted English instruction at the post-secondary level. Whether or not particular colleges or universities provide computers for in-class use in their English classes yet, most post-secondary English programs across Japan now take student access to and use of computers for English course work as a given. Indeed, much of the English language curricula being employed around Japan is tacitly based on students using computers to complete assignments, especially for English writing classes where the use of word processing software has nearly eradicated the more traditional pen-and-paper writing of the past.

While the access to computers enjoyed by university students in Japan creates a wide variety of opportunities for course-related tasks, projects, and assignments in English writing classes, it may also be problematic for students hindered by limited typing skills (Berens, 1986; Chapelle, 2003; Johnson & Brine, 2000; Li & Cumming, 2001; van der Linden, 1993). Surprisingly, although typing has long been an

item of research and discussion in L1 educational settings (Borthwick, 1993), it has drawn very little attention in relation to second or foreign language learning. Most studies on typing in L2 settings have primarily focused on the effects of word processing on the writing process and quality of written work produced, often with inconsistent findings (Li, 2006; Li & Cumming, 2001). In much of the related L2 research conducted to date, the role of basic typing ability itself has been mentioned only anecdotally in connection with a need for general computing skills (Lam & Pennington, 1995; Li & Cumming, 2001). The general consensus in these brief mentions seems to be that a lack of both general computing skills and basic typing skills may serve to make using computers for the already challenging task of writing in English even more of a challenge for many English language learners (Berens, 1986; Lam & Pennington, 1995; Li & Cumming, 2001). While several studies suggest that providing typing training and practice may work to improve L2 students' typing abilities (Johnson & Brine, 2000; Kitao, 1995; Lam & Pennington, 1995), they offer little to no evidence to support this claim.

Even in the pre-personal-computer age, it was noted that English language learners could benefit from typing training (Bernstein, 1982). However, as computer-based writing has now become a vital component of many Japanese post-secondary EFL programs, it seems even more reasonable to conclude that students need basic typing skills to effectively participate. Furthermore, popular assessment tools for English language learners like the Test of English as a Foreign Language (TOEFL) now require test-takers to type written responses on computers as well. The fact that the Educational Testing Service (2007), the company that administers the TOEFL, currently encourages test takers to practice typing prior to the test only underscores the need for students to possess basic typing skills. However, how effective is typing instruction at the college or university level?

The purposes of this study were (1) to determine the English typing

abilities of incoming first-year university students, (2) to ascertain the general improvement in typing speed and accuracy of these students over the course of a semester, and (3) to investigate whether providing limited typing training and practice in writing classes results in improved typing abilities for the students involved, and, if so, the degree to which the amount of class time allotted for such training might affect the outcome. Additionally, questionnaires administered to the participants sought to determine the students' assessment of their own typing abilities, sense of improvement after one semester, and reaction to the typing training and practice activities themselves.

Method

This preliminary study was conducted during the Spring 2007 academic semester at a large private university. Students in six writing classes served as the participants of the study (N = 152); each class was assigned to one of three groups: high attention to typing (n = 65), low attention to typing (n = 42), and control/no attention to typing (n = 45). All six classes met for 90-minute class periods once a week for twelve weeks. Also, all six classes were conducted in classrooms equipped with notebook computers with Internet access available for each student. Two online resources for typing instruction were utilized in class by the high attention and low attention groups: a free, online touch typing program (Molkho, n.d.), with 15 successive lessons each focused on cumulatively practicing two new typing keys, as well as *Typer Shark* (PopCap Games, Inc., 2002), a free, online typing game.

All participants completed both a questionnaire and a typing test at the beginning of the term and again at the end of the term. The pre-questionnaire asked all students to rate their own English typing ability according to one of the following choices: very bad, bad, average, good, or excellent. The post-questionnaire asked all students to rate their own English typing ability again with the same choices available:

very bad, bad, average, good, or excellent. In addition, the post-questionnaire asked all participants if they felt that their English typing ability had improved over the semester. Both the high attention group and the low attention group were asked if they felt that the typing training and practice that they had received in class helped their typing to improve, while the control group was asked if they wished they had received typing training and practice. Finally, all students were asked if they felt that English typing skills were important or not. The typing pre- and post-tests each consisted of three 3-minute typing tests offered online by *TypingMaster* (TypingMaster Finland, Inc., 2007), a well-known maker of typing training software and provider of online typing tests primarily for business purposes.

Procedure

Each of the three groups in the study received a different level of typing instruction. The high attention group received approximately 15-20 minutes of typing training and practice each week for ten weeks (150 minutes over the term; 14% of the total class time) using the online touch typing program and online typing game mentioned previously. The typing training consisted of an introduction to the basic principles of touch typing. The keyboard home rows were illustrated using the graphic on the website and the correct finger placement positions for each key were introduced. The students completed 3-4 lessons on the website each week for four weeks until all the lessons were completed. At this point in the semester, the students were then directed to the online typing game, *Typer Shark*, for approximately 15 minutes in each of the six remaining class meetings. The instructor monitored the students throughout the practice sessions and reminded them to use correct finger placement position and to look at the screen rather than the keyboard while typing. The low attention group accessed the same websites in class to introduce and practice typing but did so for a total

of only five weeks (75 minutes over the term; 7% of the total class time). The control group did not receive any direct typing instruction or online practice, though it was estimated that students in all groups each typed approximately 2000 words related to writing course work over the entire semester.

Results

The results of the typing pre-tests revealed the students' average net speeds and average accuracy levels at the beginning of the semester. For this study, only the means of the group net speeds, calculated by Words Per Minute (WPM), and accuracy scores, calculated by the percentage of correctly typed characters, were determined. These pre-test results established the general level of each test group's typing abilities at the beginning of the semester. At the end of the semester, after each group had received its designated typing instruction (or lack thereof), post-tests were given. The results of both the typing pre-tests and post-tests can be seen in Table 1, along with a summary of the difference in average improvement for each group. By comparing the group net speed and accuracy score means from the pre-test with the post-test, each group's averages were seen to improve, with the high attention group demonstrating the most substantial improvement in both mean net speed and accuracy.

Table 1. Typing Pre-Test, Post-test, and Improvement Results

Test group (N = 152)	Pre-test		Post-test		Improvement	
	Net speed (WPM)	Accuracy (%)	Net speed (WPM)	Accuracy (%)	Net speed (WPM)	Accuracy (%)
High attention (n = 65)	12.98	83.8	17.77	89.5	4.79	5.7
Low attention (n = 42)	15.98	84.8	19.49	88.8	3.51	4.0
Control (n = 45)	14.33	87.6	17.67	89.2	3.34	1.6

The results of the pre- and post-questionnaires administered to the students were collected and analyzed according to the percentage of respondents in each group, as seen in Table 2. The first column represents the students' pre-rating of their own typing abilities while the second column represents their post-rating at the end of the semester. The third column shows each group's sense of improvement in typing skills at the end of the semester. The fourth column represents the reaction of the high attention and low attention groups toward the limited typing instruction and practice done throughout the term, while also detailing the control group's wish to have studied and practiced typing in class. Finally, the last column shows the student's overall sense of importance of English typing skills.

Table 2. Questionnaire Results

Test group (N = 152)	Pre-rating of typing ability		Post-rating of typing ability		Typing ability improved	In-class practice helped	Typing skills important
High attention (n = 65)	Excellent	0%	Excellent	0%	Y – 94%	Y – 94%	Y – 100%
	Good	0%	Good	5%			
	Average	23%	Average	38%			
	Bad	28%	Bad	37%	N – 6%	N – 6%	N – 0%
	Very bad	49%	Very bad	20%			
Low attention (n = 42)	Excellent	0%	Excellent	0%	Y – 83%	Y – 95%	Y – 100%
	Good	5%	Good	9%			
	Average	33%	Average	24%			
	Bad	36%	Bad	38%	N – 17%	N – 5%	N – 0%
	Very bad	26%	Very bad	29%			
						Wish had in-class practice	
Control (n = 45)	Excellent	0%	Excellent	0%	Y –73%	Y – 89%	Y – 96%
	Good	2%	Good	0%			
	Average	22%	Average	24%			
	Bad	40%	Bad	53%	N – 27%	N – 11%	N – 4%
	Very bad	36%	Very bad	22%			

Discussion

The results of the typing tests reveal that all three test groups improved in both their net typing speed and accuracy over the course of the semester. Although the results demonstrate only a slight improvement of +1.28 WPM and +1.45 WPM in the mean net speed of high attention group when compared to that of the low attention group and control group respectively, the improvement in accuracy of the high attention group at +1.7% over the low attention group and +4.1% over the control is considerable. While the improvement in net typing speed of the low attention group over the control group at +0.17 WPM is negligible, the +2.4% improvement in accuracy is worth noting.

The responses to the questionnaires reveal that most of the first-year students involved in this study had a low self-assessment of their own typing abilities both at the beginning and end of the semester, though the students in the high attention group did rate themselves noticeably better at the end of the term. While a great majority of the students involved in the study felt that their typing abilities had improved during the semester, the percentage was again higher for the high attention subjects. When asked if the typing lessons and practice done in class had helped them improve, nearly all students in both the high attention and low attention groups felt that it had been beneficial. Interestingly, 89% of the students in the control group stated that they wished they had received typing instruction in class. Clearly, too, English typing skills were seen as important by nearly all students involved in the study, with 100% of the students in both the high attention and low attention groups noting the importance.

Conclusion

Most of the first-year students involved in this study began the semester with an extremely low level of English typing ability. The writing course work that required approximately 2000 words to be typed over the course of the semester is presumably much more English

typing than most students had experienced in high school. Possibly as a result of this required typing, even the control group involved in the study noticeably improved their typing ability over the course of the semester. While the high attention group made slightly larger gains in average net speed and accuracy, the 14% of total class time dedicated typing instruction and practice was significant. Although the students' responses to the questionnaires seem to indicate that the class time spent on typing was seen as valuable, it is not clear from the results of this study whether this instruction was effective enough in improving typing abilities to warrant the class time and attention required. While the low level of first-year students' typing abilities is clearly an area of concern for Japanese college and university English programs in which computer-based writing plays a large role, further studies are needed to more accurately determine the most effective way to improve typing skills. In the meantime, instructors should at least be cognizant of their students' potentially low level of typing abilities and design coursework accordingly.

References

Berens, G. L. (1986). Using word processing in the ESL composition class II. *TESOL Newsletter, 20*(6), 13.

Bernstein, R. (1982). A nontraditional approach to ESL instruction: Typewriting. *34th Annual Conference of the National Association for Foreign Student Affairs.* (ERIC Document Reproduction Service No. ED224343)

Borthwick, A. G. (1993). Effects of keyboarding/typewriting on the language arts skills of elementary school students. *Annual Meeting of the American Educational Research Association* (pp. 2-45).

Chapelle, C. (2003). *English language learning and technology: Lectures on applied linguistics in the age of information and*

communication technology. Amsterdam: John Benjamins.

Educational Testing Service. (2007). *Test of English as a Foreign Language information and registration bulletin for Internet-based testing (iBT) TOEFL-iBT.* Retrieved June 24, 2007, from http://www1.ets.org/Media/Tests/TOEFL/pdf/toefl_ibt_bulletin_07_08.pdf

Johnson, E. M., & Brine, J. W. (2000). Design and development of CALL courses in Japan. *CALICO Journal, 17*(2), 251-268.

Kitao, K. (1995). *Effects of English CBI at Doshisha University.* (ERIC Document Reproduction Service No. ED381011)

Lam, F. S., & Pennington, M. C. (1995). The computer vs. the pen: A comparative study of word processing in a Hong Kong secondary classroom. *Computer-Assisted Language Learning, 8*, 75-92.

Li, J. (2006). The mediation of technology in ESL writing and its implications for writing assessment. *Assessment Writing, 11,* 5-21.

Li, J., & Cumming, A. (2001). Word processing and ESL writing: A longitudinal case study. *International Journal of English Studies, 1*, 127-152.

Molkho, E. (n.d.). Free Touch Typing Program [Online typing lessons]. Retrieved June 14, 2007, from http://www.sense-lang.org/typing/

PopCap Games, Inc. (2002). Typer Shark [Online typing game]. Retrieved June 14, 2007, from http://get.games.yahoo.com/proddesc?gamekey=typershark

TypingMaster Finland, Inc. (2007). TypingMaster Online Test [Online typing test]. Retrieved June 14, 2007, from http://www.typingtest.com/

van der Linden, E. (1993). Does feedback enhance computer-assisted language learning? *Computers and Education, 21*(1/2), 61-65.

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