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Prospective English language teachers' views on computer and paper-based instructional materials in developing language components

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Abstract

The aim of this study was to find prospective English language teachers' opinions on computer-based materials in comparison to paper-based materials in relation to some variables such as their self-perceived knowledge of using computers and their sex. The participants were asked to decide to what degree computer and paper-based materials differed in language learning and teaching components, namely, vocabulary, grammar, pronunciation and intonation, listening, reading, speaking, writing, literature, target culture, pragmatics, general knowledge, learning strategies and styles, and creating a positive classroom atmosphere. Results indicated no significant correlation between participants' knowledge of computers and their opinions, but statistically significant relationship was found between gender and their opinions.

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1. Introduction

The term computer-assisted language learning (CALL) is used to describe any kind of language learning activity that makes use of computers. Levy (1997: p. 1) defines CALL more clearly and broadly as “the search for and study of applications of the computer in language teaching and learning”. Similarly, Gamper and Knapp (2002: p. 331) define CALL as “a research field which explores the use of computational methods and techniques as well as new media for language learning and teaching”. In foreign language teaching, just as CALL grows, so does the need towards designing accurate instructional materials (Stepp- Greany, 2003). In this instructional material designing and applying process, computers carry out multiple roles which significantly contribute to students' foreign language learning development (Kern, 2006). Computers in educational settings are known to help creating and improving motivation, adapting learning to the student, making experiential learning possible, offering authenticity, enhancing achievement, providing channels of communication, supplementing exercises and feedback,

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enabling individual and group projects, publishing student work and enabling critical thinking skills (Ruschhoff, 1993).

Computers also make available a wide range of online applications such as dictionaries and encyclopedias, hypermedia links, chat-rooms, pronunciation tutors, grammar and vocabulary practices, games, and literary extracts. Today, the most popular newspapers, magazines, radio stations, and TV channels are available online (Wilkenson and Sherman, 1996). The rise of computer-mediated instruction has brought about changes in the teaching methodologies of foreign language, and the use of the computer in and of itself does not constitute a teaching method, but rather the computer forces foreign language teaching pedagogy to think in new ways to exploit the computers' benefits (Warschauer, 1996). Warschauer and Healey (1998) identify three main phases that characterize the development of CALL over the last decades: behaviorist CALL, communicative CALL, and integrative CALL.

Current trends in CALL focus on multimedia/ integrative techniques that are derived mainly from the communicative and to a lesser extent from the behaviorist approach. Similarly, there are a number of other pedagogical approaches developed in the CALL area, such as constructivism, whole language theory, and socio-cultural theory (Mitchell and Myles, 1998; Stepp, 2002). These approaches shift the central focus away from the teacher to students in teaching and learning activities. Students have become active participants in learning and are encouraged to be explorers and creators of language rather than passive recipients of it. Also, these approaches tend to emphasize fluency over accuracy to allow students to take risks in using more student-centered activities and to cooperate, rather than compete. Hence, the tasks foreign language learners carry out on the computer can be considered as a continuum of their foreign language learning since students actively do something with the language they are learning. While the potential role of computer technology in language learning and teaching is enormous, hence, to know more about the role of CALL in EFL settings, it is believed that taking into account students' views and competence in CALL will shed more light on the field. Hence, the paper aims at finding answers to the following research questions:

1. In what areas are computer-based materials seen more applicable compared to paper-based materials?
2. Is there relationship between the level of computer knowledge and perception of CALL?
3. Is there any difference between male and female students in employing computers for learning different components of the target language?

2. Methodology

The participants in this study were 44 prospective English language teachers studying their second year at a state university in Ankara, Turkey. There were 10 males (22.7 %) and 34 females (77.3 %) students which was as expected in this educational context. The data for the study were collected through a questionnaire consisting of 14 items of language learning/teaching components, each of which uses a four-point Likert scale ranging from 'strongly agree' to 'strongly disagree', a self-rate item indicating the subjects' proficiency in applying the computer knowledge for pedagogical purposes on a scale of 'poor' to 'advanced', and a male/female item determining their sex. Participants were asked to compare between computer-based and paper-based materials. The internal consistency reliability coefficient, as determined by the Cronbach's alpha value, for language components was 0.58, which indicates a moderately low measure and this relatively lower value can be attributed to the small number of participants. Statistical packages were used to obtain descriptive statistics in frequencies, percentages, mean scores, T-test, and ANOVA. In giving the results, the participants' choices 'strongly agree' and 'agree', and 'strongly disagree' and 'disagree' were added and reported together.

3. Results

Results given in Table 1 shows how each component is viewed by prospective teachers of English by completing the statement "I think computer-based materials are superior than paper-based materials in terms of [the name of the component, such as "vocabulary" or "grammar"]". Hence, the results show that prospective teachers of English find computer-based materials more superior in developing their listening skill (97.7%) followed by knowledge of target culture (90.9%) and vocabulary (90.9%) while the writing skill (29.6%) is the least. These results suggest that prospective English language teachers viewed that computers played greater role in the learning of the listening skill and played a minor role in developing writing.

Table 1. Prospective teachers' comparison of language components

Component	SA	A	D	SD
		%		
Vocabulary	36.4	54.5	6.8	2.3
Grammar	15.9	54.5	22.7	6.8
Pronunciation and intonation	56.8	27.3	11.4	4.5
Listening	81.8	15.9	2.3	-
Reading	29.1	20.9	43.2	6.8
Speaking	27.3	31.8	29.5	11.4
Writing	2.3	27.3	52.3	18.2
Literature	11.4	38.6	43.2	6.8
Target culture	54.5	36.4	2.3	6.8
Pragmatics	13.6	56.9	25	4.5
General knowledge	27.3	56.8	13.6	2.3
Learning strategies and styles	6.8	56.8	31.8	4.5
Positive classroom atmosphere	13.6	52.3	25	9.1

Results revealed that there was no significant correlation (0.181) between the participants' self-perceived computer proficiency level and learning language components (See Table 2). Hence, computer proficiency had a positive correlation with learning the language components because as the proficiency level of subjects increased the mean value increased as well. Results were significant in considering the difference between males and females in viewing the role of computer technology for learning the given language components. The highest difference measure was attributed to pronunciation and intonation (31.1%) and the lowest one to the reading skill (0%). This major difference shows that females believed in benefiting computers for learning pronunciation and intonation more than males while both groups believe almost equally in the role of computer technology for learning reading skill. As Table 2 shows, the means of the three category of CPL, (e.g. elementary, intermediate, and advanced) are nearly 56, 63, and 67 respectively, indicating a slight difference between the respective categories. Hence, the overall relationship between them was not statistically significant ($F=0.978$ and $P\text{-value}=0.384$; $p>0.05$). The same result was obtained through the Pearson correlation between overall language components and CPL ($PC=0.181$).

Table 2. Computer proficiency level

CPL	f	%	Mean	ANOVA		PC Sig. (2 tailed)
				F	Sig.	
Poor	-	-	-	-	-	-
Elementary	2	4.5	55.95	-	-	-
Intermediate	34	77.3	63.16	-	-	-
Advanced	8	18.2	66.96	-	-	-
Total	44	100	63.53	0.978	0.384	0.181

As can be seen in Table 3, although the correlation between perception of CALL materials and gender variable indicates a reasonably low measure, the difference between the male (mean= 59) and female (mean= 65) groups was statistically significant [$t(44) = -1.57$ and $P\text{-value}=0.041$; $P<0.05$].

Table 3. Gender factor

Sex	f	%	Mean	T-test		PC Sig. (2 tailed)
				t	Sig.	
Male	10	22.7	59	-	-	-
Female	34	77.3	65	-	-	-
Total	44	100	62	-1.57	0.041	0.124

4. Conclusion

The aim of this small scale questionnaire study was to find prospective English language teachers' opinions the role of computer-based materials in comparison to the paper-based ones in EFL settings by focusing on if there was gender difference in the results. CALL arose from the combination of two separate factors: educational needs and technological means (Ahmad et al., 1985). In order to establish a successful language learning process, it is not

enough to see CALL as a technological space because its pedagogical purposes should be taken into consideration as well. The finding related to the development of writing by means of CALL is in congruence with Arikan's (2008) previous findings and when considered together they suggest that prospective English language teachers have not realized the potential of CALL in developing writing. The results of this study showed that language achievement of the students promoted as their computer proficiency increased and that computer-based materials had priority over paper-based ones in learning some language component maybe because of their sophistication. Although this study was a small scale study, future research should shed light on how prospective English language teachers see computer and paper-based materials in relation to the learning and teaching of the content.

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