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Student-engaged Viewpoint on Technology in Learning English in Zanjan Public High Schools

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***Abstract*—The purpose of this study was to investigate Iranian high school EFL students' viewpoint of technology in general and CALL (computer-assisted language learning) in particular on their learning process of English. In order to collect data, a quantitative research design was applied. The quantitative data was collected through a validated questionnaire, CALL attitude instrument (CALLAI). The questionnaire was distributed in two different high schools (one male and one female high school) in Zanjan. Participants were 340 high school students who filled in CALLAI questionnaire. The data of the questionnaire was analyzed using Statistical Packages for Social Sciences (SPSS) Version 20. Descriptive statistics including frequencies and percentages were used to analyze questionnaire items. In addition, Independent Samples Tests were applied to measure difference of attitudes by gender. Findings revealed that high school students hold positive attitude toward computer technology use in their learning process. Additionally, it was found that gender does not influence attitude of students.**

***Index Terms*—English learning, student viewpoint, technology**

I. Introduction

Today rapid development in technology and computer sciences has influenced all aspects of life, especially education. Integration of technology into education system and curriculum of schools has recently started in some developing countries such as Malaysia, Singapore, Philippines, and newly in Iran. In developing countries, the commitments of technology implementation have created a set of furious assumptions about the requirement of educational reforms "initiation stage", which requires information collection and planning, sounds to be blurring in this breakneck process of technology implementation (Young, 1991). Among different fields, implementation of technology in language learning and teaching has become very diverse and the ways that they are being used in classrooms all over the world have become central to language practice.

For decades, tape recorders and videos have been used as technological devices in language classrooms to optimize language teachers' face to face teaching (Pardede, 2012). Today computer assisted language learning (CALL) has provided wide teaching tools and materials in English classroom situations. CALL as a new methodology in the field of language teaching requires more studies to adapt classroom situations` and students` needs. Richards (2015) states that technology devices like the Internet, media, visual and audio social networks out of school contribute more greatly to meaningful and authentic language use of students than those in classroom. Integration of technological devices such as computers, interactive whiteboards, etc. into language classroom on the one hand and students as the user of these tools on the other hand put great emphasis on exploring the students' attitude toward technology and its merits and demerits on language learning process.

Attitude, a nonlinguistic variable, has been introduced as subcategory of affective variables that plays crucial role in language students learning process and is said to mirror the students' beliefs, views, ideas (Gardner, 1985; Ushida, 2005; Yu & Watkins, 2001). Some researchers have shown that attitude and motivation are interrelated, i.e. a language student's positive attitude will lead to high motivation of learning that language (Dörnyei, 2001; Gardner et al., 1985; Krashan, 1981; Ushida, 2005; Yu & Watkins, 2001). In other words, measurement of students' attitude, aspiration, and desire to learn together forms the motivation. Regarding importance of attitude, many research studies explored the language students attitude toward technology and CALL in language classroom (Jalali 2014; Onsoy, 2004; Son, 2007; Stepp-Greany, 2002; Talebinezhad, M. R., & Abarghoui, 2013; Teo, 2006; Weib, 2010). Students' attitude toward computers can be considered "a critical criterion" in evaluating and developing computer courses and curricula (Woodrow, 1991, p. 165, as cited in Afshari, et al., 2013). Investigation of students' attitude toward technology and CALL help the teachers and administrators to identify students' needs and meet these needs.

II. Literature Review

Technology has been part of our life for thousands years. In the field of foreign language teaching, every type of language teaching methods and techniques has exploited its own technological tools nearly. Warschauer and Meskill

(2000) stated that language classrooms managed by grammar translation method used a very common and primitive technology: blackboard (as cited in Sadegh Pour, 2013). Although use of technology into foreign language classrooms started over 1950s, it played an important role in teaching and learning process of EFL because of the problems related to technological structures (Alsied & Pathan, 2013). Years of 1970s and 1980s witnessed arrival of personal computers and use of this newly developed technology in education, particularly foreign language teaching. In the 1980s, technology in language classrooms was applied in the form of television, radio, film, language labs with audio and videotapes, computers, and interactive video (Cunningham, 1998). Tendency towards communicative approaches demanded new student engagement in authentic and meaningful interaction. Therefore, technology integration into communicative classroom required different cognitive and sociocognitive approaches plus modern materials and instruments (Warschauer & Meskill, 2000). Computer-assisted language learning (CALL) also developed into commonplace method in various types.

Today, use of technology, in general, and CALL in particular has been introduced as a methodology that engages students better in language learning activities and increase students motivation. According to Riasati, Allahyar and Tan (2012), integration of technology improves students' engagement and enhances their motivation in accomplishing their tasks. Warschauer and Healey (1998) suggested that CALL integration creates an authentic context in which students use language meaningfully via different language skills like listening, speaking, writing, and reading. Among different materials and methodologies in language teaching, attitudes of students toward CALL are considered a major factor influencing its influential implementation (Ayres, 2002; Ushida, 2005). Attitudes of today's students assist the instructors and faculty members to understand how students function within classrooms.

Oz, Demirezen, and Pourfeiz (2015) investigated the relationship between computer literacy, attitudes towards foreign language learning and computer-assisted language learning. Participants were 123 university students majoring in English as a foreign language. With regard to data collection, two different questionnaires, Attitudes towards Foreign Language Learning (A-FLL) Scale and the Attitudes towards Computer-Assisted Language Learning (A-CALL) Scale were used. Findings revealed positive correlations between A-FLL and A-CALL. In addition, it was found that gender and computer literacy plays significant role in attitude toward CALL.

Kitchakarn (2015) investigated the EFL students' attitudes toward use of computers in a private university on their language learning process. Regarding this, some factors including gender, experience of using computers, and perceived abilities in using programs were taken into account. In order to collect data, 192 undergraduate students filled in a questionnaire. Findings of the study revealed that computer was considered a useful tool on learning process of students. Effect of gender was not found to be significant on students' attitude, while abilities to use program had effect on students' attitude.

Kalanzadeh, Soleimani, and Bakhtiarvand (2014) examined the relationship between Iranians EFL students' motivation and use of technology in university classroom. For the purpose of data collection, 60 Iranian EFL students from different courses answered the questionnaire items. Findings revealed that university students maintained positive attitude toward technology use in their English classes. It also found that there is a relationship between learning English and using technology in EFL classroom.

In a similar study, Afshari, Ghavifekr, Siraj, and Jing (2013) examined the university students' attitudes toward use of computer-assisted language learning. A survey questionnaire was used to collect data from 100 students at university of Malaya. Students showed a moderate attitude toward CALL. In addition, three predictors: perceived ease of use, perceived usefulness, and subjective norms were the most effective factors on computer attitude.

Chen and Kessler (2013) examined how students used tablets for informal language learning in order to consider their attitudes. Participants of study were 10 English major students of university. A questionnaire was used to collect background knowledge of participants and a two-cycle procedure followed to evaluate students' daily English learning activities informally and the problems might students face. Findings of the study showed that students had positive attitude toward effectiveness of tablets as a learning tool. Furthermore, it was found that students needed more chances to be autonomous on their informal learning out of classroom.

Students' attitude is critical in integration of technology in their learning process. The research questions aim to elicit students' responses regarding their utilization and perception of technology in their everyday practice and learning. The study seeks answers to the following research questions:

1. What is the nature of community high school student experiences using computer technology in the process of learning?

2. Is there a significant difference between high school students view point of computer technology in the process of learning by gender?

$H_0$1: There is no significant difference between high school students view point of computer technology in the process of learning by gender.

III. Method

The purpose of this study was to investigate the use of technology by high school students and their attitude toward technology use in their learning process. In order to conduct the study, quantitative method design was used.

Quantitative data was gathered through questionnaires. In addition, students' attitude was compared based on gender factor.

Population of this study was students from two high schools (one male, and another female high school) in Zanjan, Iran. The entire population consisted of 638 high school students- 245 males and 393 females. In order to determine the number of the target sample, Cochran formula was used. In survey and questionnaire type studies, one of the key issues that every researcher faces is sample size. It is chiefly stated that involving the whole population in research is not necessary while small size sample decreases the practicality of results (Cochran, 1977; Dornyei, 2003). The target sample of the study consisted of 147 male and 193 female students. In order to select sample of students from first, second, and third grade of high school, proportionate stratified random sampling was applied. The final sample size of the study was selected randomly from first, second, and third grade stratum by sampling fraction of ½. The final sample size included 87 first grade, 122 second grade, and 134 third grade students.

A validated questionnaire- CALL attitude instrument (CALLAI) - by Aryadoust, Mehran, and Alizadeh (2015) was used. The items of the questionnaire include affective, behavioral, and language skills factors. Furthermore, it was validated for Persian language contexts like Iran.

IV. Data Analysis

All the items in the questionnaires were analyzed using the Statistical Packages for Social Sciences (SPSS) Version 20 except the open-ended questions relating to students background information and further questions. Frequencies, percentages and the means were calculated for each item. Since the data distribution was normal, parametric tests were used to analyze gender difference among students' attitude. Independent Samples T-Test was used to examine whether there is any difference in students attitude by gender. Results related to research questions were provided in this section. First, descriptive statistics of all questions of the questionnaire (Table 1, Appendix A) were analyzed by the Statistical Packages for Social Sciences (SPSS) Version 20.

Research Question 1

What is the nature of community high school student experiences using computer technology in the process of learning?

Regarding the first research question, high school students' experiences using computer technology in the process of learning, students answered to items 1, 2, 6, 7, 13, 19, and 21 relating to language skills components i.e. to reading, listening, speaking, writing, and vocabulary, communication, and grammar skills, respectively. It can be seen that 81.6%, 83.1%, 76.4%, 54.9%, 75.4%, 79.9%, and 57.7% of participants strongly agreed and agreed that computer technology is helpful in learning reading, listening, speaking, writing, vocabulary knowledge, communication, and grammar skills, respectively. Overall, students of the study showed positive attitude toward use of technology on learning different language skills.

Behavioral and affective components of the questionnaire addressed to usefulness, facility, necessity of CALL and learners independence, anxiety, eagerness, and attraction of CALL. Students showed their strong and moderate agreement with easier independent learning, easier learning English in classroom, advantage of learning through computer over traditional method, usefulness of computers in correcting mistakes, necessity of CALL, and help of computer in English learning 58.8%, 75%, 67.3%, 75%, 80%, 60.2%, 88.7%, respectively. Questions 23, 25, and 26 showed 56.4%, 80.2%, and 73.6% of students' agreement moderately and strongly toward usefulness of email, chatting and computer technology on learning English. Questions 3, 8, 9, 11, 16, 20, 22, 27of the questionnaire were related to affective component including anxiety, eagerness, and attraction toward computer technology. Regarding attraction 56.6%, 59.5%, and 72.9% of participants strongly agreed and agreed with question 3, 8, and 20. Students showed 64.4% and 67.6% of agreement with gaining motivation and self-confidence through technology use. It was seen 67.3% of students agreed CALL provides a stress-free environment. Also, a majority of participants (82.7%) strongly and moderately disagreed that CALL makes them feel uncomfortable and tense. Finally, 57.7% of students strongly agreed and agreed that computers dehumanize learning English and fewer students (39.1%) showed their disagreement with dehumanizing effect of computers on learning English.

Research Question 2

2- Is there any significant difference between high school students view point of computer technology in the process of learning by gender?

Second research question examined that whether there is any significant difference between participants attitude toward computer technology use on their English learning by their gender. Using an Independent Samples Test (Table 2, Appendix B) showed that there was not found any significant difference for all items of the questionnaire except item 24. In other words, it was found that there is statistically significant difference between students' attitude toward item 24 "I need training in using language learning software programs" (Sig = *p-value* = $0.001 < 0.05 = \alpha$. Therefore, the null hypothesis is rejected. This difference might be due to accessibility to technological devices.

V. Discussion and Conclusion

The purpose of this study was to investigate Iranian EFL students' viewpoint of technology and CALL use on their learning process in sample of two different high schools, one male, and one female high school. In order to collect quantitative data, a validated questionnaire by Aryadoust et al. (2015) for measuring the students' attitude in Persian countries context was used. Results of the study showed students' attitude toward learning English through computer technology. It was found that students hold the highest positive attitude toward listening, reading, speaking, vocabulary knowledge, writing, and grammar skills. Similar findings were found by Kitchakarn (2015). He found that students perceived use of computer technology positively in their listening, speaking, writing, reading skills, and vocabulary knowledge except that they showed lowest mean score regarding improvement of their grammatical knowledge through using computer. In addition, Kalanzadeh, Soleimani & Bakhtiarvand (2014) revealed that participants agreed with effectiveness of films, videos, CDs, and e-learning on development of their language skills.

Furthermore, it was found that students' had positive feeling toward using computer on their learning English process. Although, findings revealed that students strongly and moderately perceived computer technology useful in independence learning, easier learning, receiving feedback, and corrections of mistakes, more than half of students showed that they do not use computer to do their assignments. It might be due to that there is not enough CALL homework in the syllabus of English classrooms. Students of the study revealed that learning English lessons through CALL are more interesting than learning through traditional language instruction. Also, they generally reported that computer makes learning English more attractive. Regarding eagerness, students positively revealed that CALL use in the classroom motivates them and they feel confident using computer technology in the classroom. It was reported that CALL creates stress-free environment. Overall, it was found that students had positive feeling toward computer technology. Similarly, previous researches in the study showed that students regarded computer technology useful, enjoyable, stress-free, interesting, and attractive on their learning process (Afshari et al., 2013; Chen and Kessler, 2013; Kitchakarn, 2015; Kalanzadeh et al., 2014; Riasati et al., 2012).

Additionally, it was found that there was not any significant difference between students' attitude by gender. Except item 24 relating to the need for training in using language learning software in which students showed slight difference. Based on the statistics, male students showed more than female students need for training. The difference might be due to degree of accessibility and familiarity with technological tools. Similarly, some previous studies (Kitchakarn, 2015; Toe, 2006) indicated that there is not any difference between students' attitude. However, Oz, Demirezen, & Pourfeiz (2015) revealed that there is slight difference among students by gender on computer literacy. Training can inspire students and assist them to better use computer technology in their learning process.

APPENDIX A

TABLE 1
DESCRIPTIVE STATISTICS OF QUESTIONNAIRE ITEMS

Question Items	Strongly Agree		Agree		Disagree		Strongly Disagree		Total	
	F	%	F	%	F	%	F	%	F	%
1. Computer is a useful tool to access various types of English materials for reading.	93	32.7	139	48.9	25	8.8	16	5.6	273	96.1
2. CALL helps me improve my listening skills.	121	42.6	115	40.5	31	10.9	13	4.6	280	98.6
3. CALL makes lessons more interesting than traditional English instruction	70	24.6	91	32.0	71	25.0	34	12.0	266	93.7
4. Computers make English learning easier for independent learning.	41	14.4	126	44.4	84	29.6	28	9.9	279	98.2
5. Computers make English learning easier in the classroom.	65	22.9	148	52.1	50	17.6	15	5.3	278	97.9
6. CALL helps me improve my speaking skills.	82	28.9	135	47.5	45	15.8	16	5.6	278	97.9
7. Computer is a useful tool for developing writing tools.	48	16.9	108	38.0	75	26.4	41	14.4	272	95.8
8. I like learning a new language by computer.	67	23.6	102	35.9	67	23.6	40	14.1	276	97.2
9. I can get more useful feedback in CALL lessons.	45	15.8	138	48.6	71	25.0	25	8.8	279	98.2
10. I can get more useful feedback in CALL lessons.	66	23.2	149	52.5	48	16.9	11	3.9	274	96.5
11. I am confident about working with computers.	58	20.4	134	47.2	63	22.2	16	5.6	271	95.4
12. I often use computers to do my English assignments.	23	8.1	58	20.4	117	41.2	76	26.8	274	96.5
13. CALL helps me enlarge my vocabulary knowledge.	80	28.2	134	47.2	47	16.5	15	5.3	277	97.5
14. It is essential for English language learners to master computer skills.	89	31.3	138	48.6	38	13.4	11	3.9	276	97.2
15. Using computer tools to learn English is a great advantage over traditional methods.	61	21.5	130	45.8	68	23.9	16	5.6	275	96.8
16. CALL is a stress-free environment to learn English.	67	23.6	124	43.7	61	21.5	22	7.7	274	96.5
17. Learning English through computers is not necessary.	23	8.1	84	29.6	103	36.3	68	23.9	278	97.9
18. I find that using computers does not help my English learning.	9	3.2	21	7.4	137	48.2	115	40.5	282	99.3
19. The use of computers can help improve my communication skills.	69	24.3	158	55.6	39	13.7	11	3.9	277	97.5
20. Using a computer makes language lessons more interesting to me.	60	21.1	147	51.8	56	19.7	19	6.7	282	99.3
21. CALL helps me develop my grammar.	43	15.1	121	42.6	78	27.5	29	10.2	271	95.4
22. CALL makes me feel tense and uncomfortable.	13	4.6	29	10.2	125	44.0	110	38.7	277	97.5
23. Communicating by e-mail is good way to improve my English.	36	12.7	124	43.7	74	26.1	43	15.1	277	97.5
24. I need training in using language learning software programs.	27	9.5	87	30.6	96	33.8	68	23.9	278	97.9
25. Chatting with native English speakers on the internet is helpful for learning English.	114	40.1	114	40.1	31	10.9	20	7.0	279	98.2
26. I can cover more material on my own when I study English with computers.	56	19.7	153	53.9	46	16.2	21	7.4	276	97.2
27. Computers will dehumanize learning English.	58	20.4	106	37.3	69	24.3	42	14.8	275	96.8

Note. F: Frequency, %: Percentage.

APPENDIX B

TABLE 2
INDEPENDENT SAMPLES TEST

		Levene's Test for Equality of Variances		t-test for Equality of Means						
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	95% Confidence Interval of the Difference	
									Lower	Upper
Q24	Equal variances assumed	7.083	.008	3.369	276	.001	.375	.111	.156	.594
	Equal variances not assumed			3.326	247.004	.001	.375	.113	.153	.597

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