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# Computer Assisted Instruction and Digital Learning Resources through the Lens of Chinese University English Learners

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### **Authors' contributions**

*This work was carried out in collaboration between both authors.*

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## ABSTRACT

**Aims:** This paper examines Chinese university EFL learners' perceptions of utilizing computer assisted instruction (CAI) in their language learning as well as digital learning resources to develop their English language and cultural knowledge in a new learning environment.

**Methodology:** A total of 3,018 undergraduates (1,700 male and 1,318 female students) across China completed the online questionnaire anonymously.

**Results and Conclusion:** The online questionnaire data showed that the great majority of Chinese university EFL learners had positive attitudes towards CAI and digital learning resources, English language learning (ELL) websites in particular. A common perception was that these learning platforms could assist them in acquiring language knowledge and becoming competent language users. The empirical evidence of this study has indicated that the diverse learner-centered and pedagogically-oriented resources provided by the ELL websites have been effective in facilitating learners of various language proficiencies to achieve their learning goals. The findings of the study have also highlighted that CAI and digital learning resources, especially the ELL websites, are helpful to learners' language learning, and are increasingly applied in EFL classrooms in China.

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**Keywords:** *Computer assisted instruction (CAI); digital learning resources; english language learning (ELL) websites; Chinese university EFL learners; language pedagogy.*

## **1. INTRODUCTION**

English is viewed as the dominant language in the world as globalization comes to be universally accepted in the political and academic discourse [1,2]. In China, English has been the most important foreign language in the curricula of educational institutions at all levels and in foreign language learning since the early 1980s [3,4]. It is estimated that there are about 60,000 College English teachers [5] and 10 million College English students in China [6], and the total number of English learners and users in China is around 440-650 million, being the largest English learning and using population in the world [7,8,9].

English language learning and teaching in China is undergoing a dramatic reform, especially at the tertiary level, as new technologies have brought the Internet to everyday life including the realm of education. Computer assisted instruction (CAI) in language learning and teaching, the integration of computer technologies into language practice [10], has been introduced in a large scale to the English curriculum in Chinese universities. CAI language learning can provide more opportunities for students to be exposed to the target language and interact with various engaging learning materials and tasks [11]. It is anticipated that Chinese university students may be able to acquire the necessary knowledge and skills to achieve adequate language competence with the support of new technologies [12].

For a long time, classroom English language learning and teaching remains the major means for Chinese students to acquire and practice their language knowledge and skills. The integration of computer technologies into the EFL classroom is a recent initiative in China though it has been around in the west for over 20 years [13,14,15,16,17]. There was virtually no research reporting on Chinese EFL learners' understanding of application of high technologies in their language learning and teaching, which could be better facilitated in terms of learners' developing effective communicative competence, and of teachers' better organizing their classroom language learning and teaching. China has the largest population of English users and learners [7,8] and there has been tremendous gradient of infrastructure (e.g. advanced computing equipment) and a quest for digital language learning materials. Knowledge of this increasing demand and learners' specific needs may help content writers and web designers to create resources that better cater for their learning needs [18]. Such knowledge is also helpful to embed a pedagogy that can more effectively facilitate the learning and acquisition of the target language and culture in the process of learning in technology-enhanced learning environments. Computers and digital learning materials are beginning to be incorporated into the traditional English classrooms in China to assist the development of learners' linguistic competence. Lim and Shen [11] have indicated that learners in a CAI-based English classroom are often more interested, engaged, and playing a more active role in various interactive tasks than in a traditional English classroom, where learning was centered around the teacher and the textbook as a medium.

A number of research reports have documented well the positive effects of CAI in English language classrooms in different contexts [16,19,20]. Learners were described to be more motivated, interested in and focused on interactive tasks in the classroom language practice [21]. Language learners, particular those advanced and intermediate learners, performed better and achieved higher-level strategies and classroom behaviors by using a variety of technologies [22,23]. However, the gaze of these studies was often on teachers and their

perceptions of the role of CAI in the language learning and teaching. Researchers may need to turn to language learners who are the main stakeholders in the learning process. We may argue that learners' performance and achievements cannot be overlooked. Learner fit is, thus, an important component when assessing the success of CAI language practice [24].

Meanwhile, a variety of digital language learning resources, for example, online curriculum learning materials, English language learning (ELL) websites, and English news/magazine websites, offer a range of learning opportunities for English language learners and users [10]. These resources intend to attract and benefit learners and users of various language proficiencies. Hubbard [24] has proposed a framework indicating that learner fit and teacher fit are the two essential components for evaluating CAI language learning courseware. Jamieson and Chapelle [25] have also made the point that learner fit has to be considered as one of the important criteria when evaluating CAI language learning materials across multiple contexts. Thus, this study sets to investigate Chinese EFL learners' perceptions of CAI in EFL learning and teaching, and more specifically, digital English language resources on selecting English learning websites to gather first-hand evidence to map out current EFL learning in China.

ELL websites, which act as a supplementary form to current Chinese classroom learning and teaching, provide a variety of resources for language learners and users [26]. Language learners and users may acquire language knowledge from these websites to improve their language competence. A recent study<sup>1</sup> found that a popular Chinese ELL website need to be pedagogically-focused, providing diverse learning resources and self-directed instructions and practice for learners and users of different levels [18]. As a follow up study, this paper reports on Chinese university students' perceptions of the integration of CAI into the English classroom and digital learning resources accessible via English learning websites. The study addressed the following key research questions:

RQ1: How do Chinese EFL learners perceive CAI in terms of acquiring language knowledge and enhancing language competence?

RQ2: How do Chinese EFL learners think of digital English learning resources and the design of ELL websites?

## **2. METHOD**

This study was designed to collect quantitative data of Chinese university EFL students' views on the integration of CAI into the English language classroom as well as digital learning resources using an online questionnaire.

### **2.1. Target Population**

Through the network of Foreign Language Teaching and Research Press (FLTRP) in Beijing China, a total of 3,018 undergraduates (1,700 male and 1,318 female students) across China anonymously completed the online questionnaire via the website of FLTRP. As English language learning and teaching commonly occurred in the first two years in the undergraduate study in China, samples in this study were largely first-year (54.64%) and second-year (42.31%) undergraduates. Among these respondents, 31.28% of them majored in Liberal Arts, 62.69% majored in science and engineering, 1.56% specialized in Arts, and 4.47% majored in other subjects. Additionally, 3.32% of the respondents had learned English for less than six years, 86.42% of them had learned English for over six to ten years, and

10.26% for more than ten years. Only 26 students (0.87%) reported having had more than three-month overseas English language learning experience. Table 1 summarizes the respondents' demographic information.

**Table 1. Respondents' demographic information**

Items	Percentage
1. Gender	
Male	56.33%
Female	43.67%
2. Major	
Liberal Arts	31.28%
Science/Engineering	62.69%
Arts (e.g. Music)	1.56%
Others	4.47%
3. Grade	
First-year undergraduate	54.64%
Second-year undergraduate	42.31%
Others	3.05%
4. Length of learning English	
Less than 6 years	3.32%
6-10 years	86.42%
More than 10 years	10.26%
5. More than three-month overseas English language learning experience	
Yes	0.87%
No	99.13%

## 2.2 Online Questionnaire

The online questionnaire designed for this study consisted of multiple choice closed-ended and Likert-type questions to explore Chinese EFL learners' views of the integration of CAI into language learning as well as digital learning resources used to assist their language learning. The questions were developed on the basis of the findings of previous studies (for example, [18,27,28]). Sample multiple choice close-ended questions employed in this study were: Does your English course use online learning and teaching? Do you often visit overseas ELL or English news/magazine websites?

There were 39 Likert-type questions utilized in the questionnaire to collect data on Chinese EFL learners' perceptions of online English learning as well as digital learning resources. The use of Likert-type scales can avoid loading respondents with immense work and ensure an accurate report of the reality under study. Sample statements used in the study were: Learning English online is more convenient than the traditional learning methods; I can acquire more language knowledge and related information from ELL and English news/magazine websites than the classroom learning and teaching. For consistency and a better focus, twenty statements were selected to examine students' perceptions on CAI and digital learning resources in their language learning.

It took the students approximately 30 minutes to complete the online questionnaire. The filling in and submission of the completed questionnaire was taken as formal consent to participate. Percentages, means, and standard deviations were applied to analyze the data.

Results were presented in tables as well as described in words. The Statistical Package for the Social Sciences (SPSS) Version 17 was utilized to obtain statistical analysis of the data.

### **3. RESULTS AND DISCUSSION**

The raw data collected from the online questionnaire were coded and discussed in three broad themes: (1) Chinese EFL learners' perceptions of CAI in language learning; (2) their views of digital learning resources, and (3) their viewpoints of the overall design of the ELL websites.

#### **3.1 Chinese EFL Learners' Perceptions of CAI in Language Learning**

There is a common perception that new technologies have been extensively integrated into foreign language teaching in general and EFL in China where learners especially those university students would readily embrace technologies in their life and academic study[29]. But our data shows this is not quite the case (only 47.87% of the respondents indicated that they had online English learning practice) or, at least it has been exaggerated out of proportion given the large student population across China (10 million College English students) and those studying in institutions with often unevenly distributed funds and resources (merely 3.52% of the respondents came from remote western regions). This disproportion is further magnified when we look at the total percentage of integrating computer technologies into the language classroom (which is less than half of the total number of students) as well as the level of engagement in learning and teaching (57.07%) given integration of CAI is mandatory as stipulated by college English curriculum requirements [12].

Even though data report shows a large percentage of Chinese university students (40.95%) who hold a positive view of CAI and utilize it in their language learning, there is an inconsistency in the way they perceive the usefulness of technologies and the extent to which they engage technologies in their language study. The questionnaire data show that a majority of Chinese EFL students (44.51%) tend to view classroom learning practice as being more helpful in their language development and acquisition of cultural knowledge, although a number of students believe that integrating CAI into learning English is convenient (45.12%) and efficient (40.95%), and will be a new trend of learning English in China (50.72%) see Table 2. Chinese College English learning and teaching is still dominated by the traditional lecturer-led and textbook based approach, and students are requested to pass a variety of curriculum based examinations, for instance, College English Test (Band Four and Six<sup>1</sup>), which focus on examining students' grammatical competence only [30].

The chalk-and-talk method remains prevalent in EFL learning and teaching in China as not every EFL teacher in China has received professional training in using a variety of software and computers and many of them are novices in using computer technologies in their teaching practice [30]. Though Chinese EFL students get used to this method, many of them expressed a desire to seek a more efficient method that would allow them to acquire effectively the linguistic and cultural knowledge with the support of advanced technologies [29].

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<sup>1</sup>College English Test (Band Four and Band Six), prepared by the College English Test National Committee and approved by the Ministry of Education, is carried out twice a year in China, generally in June (summer) and December (winter), to assess the implementation of the College English learning and teaching.

**Table 2. Chinese EFL learners' opinions of CAI in English learning**

<b>Question</b>	<b>1 (%)</b>	<b>2 (%)</b>	<b>3(%)</b>	<b>4 (%)</b>	<b>5 (%)</b>	<b>Mean</b>	<b>Standard Deviation</b>
Q22	11.81	32.70	25.31	25.92	4.26	3.65	1.61
Q25	4.99	25.75	28.31	34.52	6.43	4.15	1.49
Q26	4.99	23.32	26.57	36.44	8.68	4.31	1.54
Q33	3.21	18.85	27.22	40.82	9.90	4.53	1.48

*Note: 1=strongly disagree, 2=disagree, 3=neutral, 4=agree, 5=strongly agree; Q22 I spend more time studying language and culture online than studying in the classroom. Q25 Learning English online is more efficient than traditional learning methods. Q26 Learning English online is more convenient than traditional learning methods. Q33 Online learning will be a new trend of learning English in China.*

The integration of CAI would help contribute to efficient and convenient English teaching and language learning [31]. Even though some Chinese EFL learners have reservations about it, it is fair to predict that advanced technologies and digital learning resources will be increasingly applied in English language learning and teaching in China. Learners may acquire their language knowledge and competence autonomously through a number of resources with the assistance of new technologies. The following section reports in detail on Chinese EFL learners' views of various digital learning resources for their language knowledge acquisition.

### **3.2. Chinese EFL Learners' Views of Digital Learning Resources**

Learning materials offer an indispensable venue contributing to learners' language input and improving their understanding about a language [32]. The digital learning resources discussed in this study include online curriculum learning materials, and ELL or English news/magazine websites that are popular with Chinese EFL learners to expand their English language knowledge. It has been stipulated by college English curriculum requirements [12] that the recent published College English textbooks have a mandated online curriculum learning materials for teachers and learners to access. The data indicate that more than half of the respondents (52.71%) agree that the online learning materials prepared by commercial publishing houses served as supplementary resources to hard copies of English textbooks. Students are able to acquire English language knowledge from these digital learning materials (40.95%), which are closely related to the English textbooks used in the classroom practice (44.82%) see Table 3.

To date, the textbook is considered to be the most important linguistic input tool used in EFL learning and teaching [33,34,35], and it is one of the major resources for Chinese EFL learners to gain their language knowledge [36]. The online curriculum learning materials appear to keep a close relationship with English textbooks. Digital learning resources, as an alternative learning form, provide additional language and cultural knowledge for students and serve as supplementary materials to the textbooks, which have become popular among Chinese EFL learners [37]. Along with this, the emerging ELL or English news/magazine websites have provided rich resources for language learners to obtain their language knowledge [18]. However, Chinese EFL learners are not practical website users to acquire language knowledge as they prefer to use textbooks and rely on lecturer-led instruction in the classroom [37].

**Table 3. Chinese EFL learners' viewpoints of online curriculum materials**

Question	1 (%)	2 (%)	3(%)	4 (%)	5 (%)	Mean	Standard Deviation
Q1	6.77	21.62	26.79	37.48	7.34	4.24	1.56
Q2	4.86	24.49	29.70	35.78	5.17	4.15	1.43
Q4	3.69	18.15	25.45	44.42	8.29	4.51	1.46

*Note: 1=strongly disagree, 2=disagree, 3= neutral, 4=agree, 5=strongly agree; Q1 I am satisfied with the online curriculum learning materials that are closely related to English textbooks. Q2 I can acquire language knowledge from online curriculum learning materials. Q4 Online curriculum learning materials serve as supplements to English textbooks*

The questionnaire data indicate that only a small number of students (8.22%) often visit China-based English websites, and fewer students (4.68%) visit overseas websites. Some students (36.45%) show no interest in visiting any English websites. Some of them (38.58%) do not know how to select appropriate English websites or access addresses to proper websites for their English language learning (32.61%). Even worse, a certain group of students (37.95%) are not able to understand the website content. This finding is contradictory to the common perception that technology-based learning and teaching has permeated language classrooms in China. To Chinese EFL students, using English websites to acquire language knowledge is a new means, which takes time for them to fully accept and adopt this method in their English language practice. At a deeper level, it requires them to make a drastic shift in terms of learning styles, learners' role in learning and as well as in learner-teacher relationships [38].

Different from the hard copies of the text books, English websites provide richer learning resources and more space for learners to obtain language knowledge and develop their language competence [10]. English websites allow the website users to access a large amount of up-to-date information as well as language learning materials, and to some extent, they serve as an additional channel for learners to obtain language knowledge apart from the classroom practice [18]. Even if Chinese EFL students believe that English websites provide extra learning materials (47.55%) and they can retrieve more language knowledge from English websites than the English classroom (38.87%), only around 30% questionnaire respondents indicate that they are able to acquire English language knowledge from these websites see Table 4.

As high technologies have been introduced to the Chinese EFL learning only in the past few years, students are not used to utilizing websites to acquire their language knowledge. Many of them might be novices in using English websites in their language practice, and it might be not easy for them to select and use appropriate websites. This situation has become worse in the western underdeveloped regions in China. In addition, not every website considers users' various language proficiencies as well as their needs. The content provided by some English websites might not be helpful to facilitate learners of different language proficiencies to develop their language competence. Also, Chinese EFL students' poor level learner English prevents them from accessing their needed knowledge. Even if Chinese learners may eventually reach sufficient English level to access the digital resource as websites, there is still this cultural issue relating to their perceptions of learning, learner's role and teacher-student relations in the language classroom that need to be resolved. All this, has created lots of challenges for website designers and content writers who need to take all this into consideration when designing an ELL website.

**Table 4. Chinese EFL learners' perceptions of ELL or English news websites**

Question	1 (%)	2 (%)	3 (%)	4 (%)	5 (%)	Mean	Standard Deviation
Q10	6.82	32.87	28.27	28.00	4.04	3.83	1.48
Q11	9.29	33.82	26.88	25.75	4.26	3.71	1.55
Q20	3.65	20.84	27.96	39.04	8.51	4.41	1.48
Q21	5.82	26.65	28.66	32.79	6.08	4.07	1.51

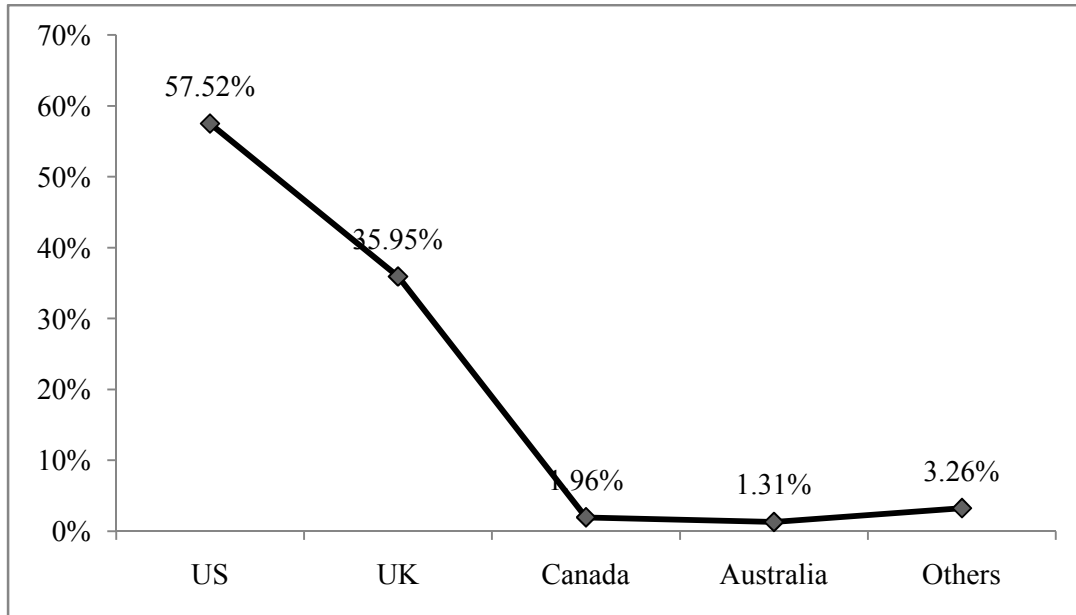
*Note: 1=strongly disagree, 2=disagree, 3= neutral, 4=agree, 5=strongly agree; Q10 I can acquire language knowledge and related information from Chinese ELL or English news/magazine websites. Q11 I can acquire language knowledge and related information from overseas ELL or English news/magazine websites. Q20 ELL or English news/magazine websites provide supplementary materials to the classroom learning and teaching. Q21 I can acquire more language knowledge and related information from ELL or English news/magazine websites than the classroom learning and teaching*

As an important component of the website, the content of English websites has impacts on learners' options of various websites [18]. Chinese EFL learners are called 'mute' and 'deaf' [30,39] language learners as their lacking cultural and pragmatic knowledge results in failures in communication [40]. While cultural and pragmatic knowledge instructions are often neglected in the classroom practice in China [30], Chinese EFL learners show their interests in acquiring these knowledge. It is noted by the questionnaire data that students are able to obtain cultural knowledge of English-speaking countries (37.64%) as well as pragmatic knowledge (38.47%) via studying the audio-visual materials provided by English websites see Table 5. Audio-visual materials as a rich resource for language learning, for example, English news and movies, provide authentic and up-to-date learning materials [41] and make the learning process easy and relaxing. Chinese EFL students (46.24%) show their satisfaction to the contemporary language and current information provided by English websites. Though students prefer to use authentic learning materials to acquire their language knowledge, authentic materials have been misunderstood as only texts from the US or the UK see Fig. 1. Being influenced by the traditional lecturer-led approach, Chinese EFL students would like to use materials from the US or the UK rather than those from other countries [42]. Authentic texts should be a stretch of real language [41] and cover native speakers of a variety of cultural backgrounds and countries, and Chinese EFL learners can experience diversities of cultures and englishes that enable them to use lingua franca English in global communication via learning these authentic materials [43,44].

Chinese EFL students appear to adopt a pragmatic approach in perception and practice when it comes to examinations. Their perceptions of CAI and online language resources would change or at least be qualified. This is reflected in their preference to examination oriented materials as they believe such examination materials will enable them to score high marks to put them in a better position in China's highly competitive job market (all government departments and state-owned or foreign investment enterprises in China require their employees to have English certificates) as employers would look favorably at the prospective employees with high English language proficiency (often measured by CET Band Four or Six, or other proficiency tests like TOFEL and IELTS). A close look at the data see Table 5 generated from the different but relation question highlighted that Chinese EFL students did not show their complete satisfactions to examination materials provided by English websites as a similar percentage (around 36%) students expressed their either positive or negative attitude toward these materials. Therefore, language learners' preferences to varieties of examinations and examination skills, which, to some degree,



impact the popularity of the website [18], need to arouse English website content writers' attention.



**Fig. 1. Distributions of countries of overseas ELL or news/magazine websites**

Digital learning resources, in forms of online curriculum materials and ELL or English news/magazine websites, provide rich materials for Chinese EFL learners to acquire language knowledge as extra resources except for the classroom practice. With the support of high technologies, English websites have become indispensable resources for Chinese EFL learners to develop their language abilities and be competent language users, particular for language learners' independent learning. Additionally, the website design, to a certain degree, impacts learners' options of various English websites [28] that is discussed in the following section.

### **3.3 Chinese EFL Learners' Viewpoints of the Overall Design of the ELL Websites**

A learner-centered designed ELL website makes its users benefit from its hypermedia-based, content-rich learning programs and contexts [28]. Chinese EFL students (39.82%) indicate that English websites are not hard to access though they have difficulties in selecting and accessing appropriate ones for their study. The webpage design of ELL websites is attractive and it is easy to access functions displayed on the webpage (38.34%) see Table 6. To some extent, the webpage design and the easy access to the website and website functions will influence website users' options of ELL websites. Well-designed good-looking web-pages and easy usability are priorities of ELL websites to attract users [45].

**Table 5. Chinese EFL learners' perceptions of the content of ELL or English news/magazine websites**

Question	1 (%)	2 (%)	3 (%)	4 (%)	5 (%)	Mean	Standard Deviation
Q12	6.64	28.10	27.62	32.56	5.08	4.00	1.52
Q13	5.69	28.27	27.57	32.96	5.51	4.04	1.50
Q14	5.95	29.70	28.53	31.00	4.82	3.97	1.48
Q16	3.99	22.36	27.41	38.86	7.38	4.33	1.47

*Note: 1=strongly disagree, 2=disagree, 3= neutral, 4=agree, 5=strongly agree; Q12 I can acquire cultural knowledge of English-speaking countries from audio-visual materials provided by ELL or English news/magazine websites. Q13 I can improve my pragmatic competence through studying the information and audio-visual materials provided by ELL or English news/magazine websites. Q14 Examination materials provided by ELL websites can help me pass various English examinations. Q16 Information provided by ELL or English news/magazine websites is up-to-date.*

Besides, the content of ELL websites is another important aspect to be considered when designing the websites. Language learners would like to access rich and valuable resources to facilitate their language competence development [28]. The questionnaire data indicate that a number of Chinese EFL students (39.72%) are not satisfied with the content provided by ELL websites as their practical needs and language proficiencies (39.78%) as well as their cultural backgrounds (41.25%) are rarely considered by website designers when designing ELL websites see Table 6.

The ELL websites may need to consider the needs of language learners and users of different language proficiencies [18] and contextualize the design and the content of the websites. The ELL website design should be learner- or user-centered, considering the learning aims as well as language proficiencies of learners or users of all levels, and trying to provide rich resources to enable them to achieve their learning goals. Language learners or users of different language proficiencies can access various authentic up-to-date learning materials from these websites. Also, Chinese EFL learners' cultural backgrounds cannot be overlooked. Detailed instructions are needed when it comes to contradictions between Chinese culture and other cultures, which are helpful to learners to better acquire English language knowledge.

**Table 6. Chinese EFL learners' opinions of the design of ELL websites**

Question	1 (%)	2 (%)	3 (%)	4 (%)	5 (%)	Mean	Standard Deviation
Q18	4.17	26.14	29.87	33.78	6.04	4.15	1.44
Q19	5.08	27.00	29.58	32.22	6.12	4.10	1.47
Q37	4.47	25.53	30.28	33.73	5.99	4.16	1.46
Q38	4.43	25.01	30.78	33.48	6.30	4.19	1.46
Q39	4.52	25.53	28.70	33.82	7.43	4.22	1.50

*Note: 1=strongly disagree, 2=disagree, 3= neutral, 4=agree, 5=strongly agree; Q18 ELL or English news/magazine websites are easily accessible. Q19 The webpage design of ELL websites is attractive and it is easy to access all functions displayed on the webpage. Q37 I am not satisfied with the content and information provided by ELL websites. Q38 Chinese EFL learners' practical needs and language proficiencies were seldom or never considered by ELL websites. Q39 Chinese EFL learners' own cultural background was seldom or never considered by ELL websites.*

#### **4. CONCLUSION**

It could be concluded from this study that Chinese EFL learners in general showed a very positive attitude toward the integration of CAI into language learning and digital English resources. CAI language learning has been accepted as an effective way for Chinese EFL learners to acquire linguistic and cultural knowledge in a foreign language context. Online English learning with the support from a variety of digital resources tends to be largely applied in the EFL learning and teaching in China. However, at the design level, ELL websites may need to be informed by a learner-centered and culturally interactive approach. This needs to be reflected in task design and content writing. An ideal English learning website need to include rich resources prepared in well versed and easy to follow English for website users of various language proficiencies so as to meet their learning goals. The content and associated tasks of the websites should reflect a learner-focus and understanding of their needs in terms of learning purpose (e.g. to pass examinations) and learning styles (e.g. include language tasks that would facilitate a shift in the way student approach the task, perceive their role differently and engage in a changed student-teacher relationship in the process of learning). At the same time, website designs need to provide tools for learners and users to develop new learning styles and knowledge and strategies for effective communication in the target language. The webpage design should be attractive and the websites as well as website functions should be easy to access. This study has provided empirical evidence from the learner's perspective to understand CAI and digital learning resources in the Chinese EFL learning and teaching context, which will contribute to the development of CAI EFL practice and the design of ELL websites in China.

#### **ETHICAL APPROVAL**

The author hereby declares that this research project was conducted after the approval had been obtained from the Human Ethics Committee of the University of Sydney, Australia.

#### **COMPETING INTERESTS**

Authors have declared that no competing interests exist.

#### **REFERENCES**

1. Bamgbose A. World englishes and globalization. *World Englishes*. 2001;20(3):357-363.
2. Jenkins J, Cogo A, Dewey M. Review of developments in research into English as a lingua franca. *Language Teaching*. 2011;44(3):281-315.
3. Chang JY. Globalization and english in Chinese higher education. *World Englishes*. 2006;25(3-4):513-525.
4. Wu YA. English language teaching in China: Trends and challenges. *TESOL Quarterly*. 2001;35(1):191-194.
5. Zhang J. A study on status quo and problems in college english teacher team construction. *China Higher Education*. 2010;17:53-54.
6. Wu Q. Experiments of college english teaching reform. 2009. Assessed 3 October 2012. Available:[http://www.moe.edu.cn/publicfiles/business/htmlfiles/moe/moe\\_176/200412/4915.html](http://www.moe.edu.cn/publicfiles/business/htmlfiles/moe/moe_176/200412/4915.html).

7. Bolton K. Chinese englishes: A sociolinguistic history. Cambridge: Cambridge University Press; 2003.
8. He D, Zhang QY. Native speaker norms and China english: From the perspective of learners and teachers in China. *TESOL Quarterly*. 2010;44(4):769-789.
9. Jiang Y. China english: Issues, studies and features. *Asian Englishes*. 2002;5:4-23.
10. Garrett N. Computer-assisted language learning trends and issues revisited: Integrating innovation. *The Modern Language Journal*. 2009;93(Focus Issue):719-740.
11. Lim KM, Shen H. Integration of computers into an EFL reading classroom. *Re CALL*. 2006;18(2):212-229.
12. Chinese college english education and supervisory committee. *College english curriculum requirements*. Beijing: Foreign Language Teaching and Research Press; 2007.
13. Chapelle C. *Computer application in second language acquisition*. Cambridge: Cambridge University Press; 2000.
14. Dunkel P. *Computer-assisted language learning and testing: Research issues and practice*. New York: Newbury House; 1991.
15. Levy M. *Computer-assisted language learning: Context and conceptualization*. Oxford: Clarendon; 1997.
16. Sullivan N, Pratt E. A comparative study of two ESL writing environments: A computer-assisted classroom and a traditional oral classroom. *System*. 1996;24(4):491-501.
17. Warschauer M. The changing global economy and the future of English teaching. *TESOL Quarterly*. 2000;34(3):511-535.
18. Kettle M, Yuan Y, Luke A, Ewing R, Shen H. The pedagogical, linguistic and content features of popular English language learning websites in China: A framework for analysis and design. *Frontiers of Education in China*. 2012;7(3):534-552.
19. Cooper M, Selfe C. Computer conferences and learning: Authority, resistance, and internally persuasive discourse. *College English*. 1990;52:847-869.
20. Spitzer M. Computer conferencing: An emerging technology. In: Selfe C, Hawisher G, editors. *Critical Perspectives on Computers and Composition*. New York, NY: Teachers CP; 1989.
21. Golonka EM, Bowles AR, Frank VM, Richardson DL, Freynik S. Technologies for foreign language learning: A review of technology types and their effectiveness. *Computer Assisted Language Learning*. 2014;27(1):70-105.
22. Grgurović M, Chapelle CA, Shelley MC. A meta-analysis of effectiveness studies on computer technology-supported language learning. *Re CALL*. 2013;25(2):165-198.
23. Macaro E, Handley Z, Walter C. A systematic review of CALL in english as a second language: Focus on primary and secondary education. *Language Teaching*. 2012;45(1):1-43.
24. Hubbard P. An integrated framework for CALL courseware evaluation. *CALICO Journal*. 1988;6(2):51-72.
25. Jamieson J, Chapelle CA. Evaluating CALL use across multiple contexts. *System*. 2010;38(3):357-369.
26. Vogel T. Learning out of control: Some thoughts on the World Wide Web in learning and teaching foreign languages. In: Chambers A, Davies G, editors. *Information and Communications Technology: A European Perspective*. Lisse: Swets & Zeitlinger; 2001.
27. Chapelle CA. The relationship between second language acquisition theory and computer-assisted language learning. *The Modern Language Journal*. 2009;93(Focus Issue):731-753.

28. Liu GZ, Liu ZH, Hwang GJ. Developing multi-dimensional evaluation criteria for English learning websites with university students and professor. *Computers and Education*. 2011;56(1):65-79.
29. Zhou H. Application of CAI in the foreign language teaching. *Tai Yuan Sci-Tech*. 2006;10(10):88-91.
30. Zhao Y. The relationship between deaf and mute English and the foreign language learning. *Education Science and Culture Magazine*. 2009;1:111-112.
31. Li Y. An attempt on the CAI-based College English teaching. *Computer Assisted Foreign Language Education*. 2007;114:59-61.
32. Gilakjani AP. The significant role of multimedia in motivating EFL learners' interest in English language learning. *I. J. Modern Education and Computer Science*. 2012;4:57-66.
33. Altbach PG. The unchanging variable: Textbooks in comparative perspective. In: Altbach PG, Kelly GP, Petrie HG, Weis L, editors. *Textbooks in American Society: Politics, Policy and Pedagogy*. Albany, NY: State University of New York Press; 1991.
34. Kim D, Hall JK. The role of an interactive book reading program in the development of second language pragmatic competence. *Modern Language Journal*. 2002;86:332-348.
35. Vellenga H. Learning pragmatics from ESL and EFL textbooks: How likely? *TESL-Electronic Journal*. 2004;8(2):1-18.
36. Ji P. *Pragmatics and pedagogy in College English teaching*. Shanghai: Shanghai Foreign Language Education Press; 2008.
37. Liu L. Chinese university students' attitudes towards the application of CAI in English language learning. *Foreign Language and Literature*. 2013;1(1):199-202.
38. Zhong Y, Shen H. Where is the technology-induced pedagogy? Snapshots from two multimedia EFL classrooms. *British Journal of Educational Technology*. 2002;33(1):39-52.
39. Zhang H. Strategies on how to help Chinese students walk out of deaf and mute English. *China Education Innovation Herald*. 2008;23:22-23.
40. Rose KR, Kasper K, editors. *Pragmatics in language teaching*. Cambridge: Cambridge University Press; 2001.
41. Gilmore A. Authentic materials and authenticity in foreign language learning. *Language Teaching*. 2007;40(2):97-118.
42. Shen H, Yuan Y. Reframing research and teaching for Chinese English: Perception, practice and paradigm. *Foreign Language Learning: Theory and Practice*. 2013;1:1-7.
43. Canagarajah AS. Negotiating the local in English as a lingua franca. *Annual Review of Applied Linguistics*. 2006;26:197-218.
44. Jenkins J. Current perspectives on teaching world Englishes and English as a lingua franca. *TESOL Quarterly*. 2006;40(1):157-181.
45. Shield L, Kukulska-Hulme A. Are language learning websites special? Towards a research agenda for discipline-specific usability. *Journal of Educational Multimedia and Hypermedia*. 2006;15(3):349-369.

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