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Determination of Turkish University Students' Attitudes for Mobile Integrated EFL Classrooms in North Cyprus and Scale Development: ELLMTAS

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Abstract: In this study, the attitudes of Turkish university students with the regard of utilizing mobile technologies were investigated in English language learning classrooms. Primarily, this is a research of the attitudes of university students who were learning the English language via mobile technologies and who were investigated by the researchers (Uzunboylu, Hürsen, Özütürk & Demirok, 2014) and the "English Language Learning via Mobile Technologies Attitude Scale (ELLMTAS)" was developed. The scale contains 37 items and is composed of six sub-dimensions which have been applied to 275 university students. The results shows that university students prefer mobile enabled language classrooms in Turkish Republic of Northern Cyprus. Furthermore, students' departments and grades do not differ significantly in their English Language Learning via mobile technologies.

Keywords: English Language Learning, Mobile Learning, ELLMTAS Scale, Attitudes, Scale Development
Categories: J.5

1 Introduction

Mobile technologies were first invented in 1973. At the time, nobody could have thought that, besides their uses in communication, they would play an essential part in our routine and educational lives. The concept of mobile technology is a technical term; mobile technologies and personal digital assistants such as the information-communication device are examples of the standards. Mobile technologies are constantly developing so many around us and their technical abilities do not escape from the eye of the new era technology users [DeWitt & Siraj, 10; Özdamlı, 11]. In

addition to this, mobile technologies are now crucial in our lives over the last ten years, because communication and technology have been enhanced, people need mobile technologies more than anything else [Azar & Nasiri, 14; Segaran *et al.*, 14; Soleimani *et al.*, 14; Lin, 14; Rahimi & Miri, 14]. Therefore, researchers started to think that the utilization of mobile based language classrooms would bring a reform in the educational life of all students types, especially foreign language classrooms in Northern Cyprus.

When looking at past communication technologies, mobiles have distinctive qualifications. Specially they are as small as a wallet, independent as toughts and accordance with every budget [Rahimi & Miri, 14; Viberg & Grönlund, 13; Underwood *et al.*, 12; Wong *et al.*, 11]. Once mobile technologies became critical to everyone's life, it was felt that there was to be a need to use it in language learning tasks as well [Miangah & Nezarat, 12]. Technologies has become a very powerful aid in many communication courses if learners are motivated and have positive attitudes, especially as part of the language learning process.

1.1 Do motivation and attitude effect language learning?

As the fingers of both hands are not equal, teaching and learning methods are changing person to person. This inequality brings inevitable question in minds. "What influence how we teach?". The answer of this question would vary teacher to teacher. According to [Cruickshank *et al.*, 11], teachers teaching is affected from age, personal characteristic and experience. But also, the defectiveness of incentive in teaching-learning have been shown as a major impact. So, it does not matter whether the teacher is novice or not, using innovation would bring incentive urge [Oroujlou & Vahedi, 11; MacIntyre & Blackie, 12; Kao & Oxford, 14; Galishnikova, 14]. Motivation is essential factor in achievement score and performance [Soyer *et al.*, 14; Khalaila, 14]. Another factor which influences learning is learners' attitude. Individual's attitudes toward the second language (L2) and the L2 community. According to the traditional stance taken in social psychology, someone's attitudes towards a second language influence that person's responses to that second language.

Innovation in language learning field, mobile technologies, has brought the feeling of secure, convenience and success for learners language skills. It is very important to set the goal according to the language learners' attitudes [Rahimi & Miri, 14; Lai, 15]. With this, learners' stereotyping to foreign language learning could fade away. If learners believe the usage of new technologies will prevent their effort and achievement, the learners will have negative attitudes towards the language [Hussain *et al.*, 11; Ünal & Sarı, 13].

Consequently, when it is viewed from the works done in this area, it was not found any developed scale related with this subject as it is called "English language learning via mobile technologies". This is considered to be a hindrance to providing data about language learning and making an accurate achievement. The main objective of this research is to develop a scale which shows learners' beliefs about mobile enabled language classrooms and see whether university students wish to have mobile integrated language classrooms in the future. Therefore, the researchers' goal was to investigate whether mobile technologies facilitate English language learning/teaching in language classrooms and if students' departments make a significant difference to its effectiveness. In this study, the researchers' aim was not

only to develop an ELLMTAS, but also to evaluate different students' attitudes toward English language learning via mobile technologies and their demographic variables.

1. Is the developed ELLMTAS scale valid and reliable?
2. What are university students' attitudes to English language learning via mobile technologies in general?
3. To what extent do university students' departments play an important role in English language learning via mobile technologies and do they make any significant difference to their attitudes?
4. To what extent are university students' grades important for English language learning via mobile technologies and do they make any significant difference to their attitudes?

2 Research Methodology

In this research, both quantitative and qualitative methods were used. Also, all the methods are performed under methodology part and they are given below.

2.1 Participants

Population of the study consists of the university students studying in North Cyprus at Cyprus International University. The sample of the study was 275 elementary level English language learners. In the study, (n= 95) male and (n=180) female students took part. As for the distribution of participants' educational departments, this is presented in Table 1.

	Frequency	*Percent (%)*
Engineering	70	25.5
Education	119	43.3
Law	86	31.3
Total	275	100

Table 1: Participants' university departments

2.2 Instruments

In quantitative method, attitude scale questionnaire had been used. The questionnaire had two parts. The first part contains "demographic information" and the second part includes "attitudes towards using mobile technologies in English language classrooms". The first part of this scale shows the participants' age, department and grade; the second part shows English elementary class university students' attitudes on the use of mobile devices. The process and procedure by which this scale was developed is explained in detail below.

The English language learning via mobile technologies attitude scale (ELLMTAS) was designed for the purpose of exploring the students' attiudes towards language learning. The scale was prepared by incorporating experts' (n=15) views and reading the relevant literature. The university experts whose opinions were used during the scale-designing process were lecturers at the same time from the Department of Curriculum and Instructions (n=5), Computer and Instructional Technology Teaching (n=5), and English Language Learning (n=5). The researchers also interviewed 30 students at Cyprus International University (CIU). Those students' departments were (n=10) from Law, (n=10) Education and (n=10) from the Engineering department. Furthermore, those students who were taking an elementary English course were asked to write a composition about "Using mobile technologies in an English course and their attitudes". Later on, the researchers made a content analysis for 275 compositions. These compositions also helped researchers to have our six different dimensions.

Content analyses and the experts' views were creating an occurred item pool along with the literature review. After these processes, a 120-item pool draft version was gathered and shown to the experts to assess the content's validity. Then, students' attitudes on the use of mobile devices were taken again. After optaining the opinion of students' and expersts', 76-item pool was formed. Later, the scale was developed using these results and was distributed to same 275 students again. The scale was piloted and its validity and reliability were tested in this case.

In the scale, a 5-point Likert-scale format (1 stands for strongly disagree and 5 stands for strongly agree) was used to show how the scale was evaluated. Consistency reliability tests were administered by using the coefficient Cronbach's Alpha. There were some items below 0.40 and they were extracted from the scale. As a result, the last version of scale therefore contained 37 items.

2.3 Data Analysis

First of all, a factor analysis was used to detect factor groups in process of developming a measurement tool to get the construct validity. The aim of the factor analysis, to create a group measuring the same factor which will bring them together. After determining factor structure of the scale tool, the developed attitude "ELLMTAS" scale and size of Cronbach Alpha internal consistency coefficients were calculated. The meaningful level is accepted as 0.05. Moreover, the scale's mean and standart deviation were calculated by using SPSS 20 program. The validity and reliability of the ELLMTAS (Kaiser-Mayer-Olkin) and Barlett's tests were used. Nebertheless, three times factor load applied to scale until it becomes final version. This was done because the low factor values had removed from scale.

3 Results

3.1 Validity and Reliability of ELLMTAS scale

Ensuring the validity and reliability of a scale is not easy. Therefore, a scale passed through two different tests. These tests are KMO test (Kaiser-Meyer-Olkin) and Bartlett's test of sphericity (BTS). So in this study, first KMO test was performed and then (BTS) were applied in order to understand the suitability of factor analysis.

According to the test result, KMO value was found to be 0.912 and it shows the measured characteristic is normally distributed in the population. When KMO result is higher than 0.90, it is considered to be perfect [Büyüköztürk, 09]. The total variance of the scale is presented in detail in Table 2.

Component	Initial Eigen values			Extraction Sums of Squared Loadings			Rotation Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	11.144	30.119	30.119	11.144	30.119	30.119	4.965	13.420	13.420
2	3.892	10.520	40.639	3.892	10.520	40.639	4.056	10.962	24.381
3	1.739	4.699	45.338	1.739	4.699	45.338	3.910	10.569	34.950
4	1.398	3.779	49.117	1.398	3.779	49.117	2.931	7.922	42.873
5	1.158	3.130	52.246	1.158	3.130	52.246	2.641	7.137	50.010
6	1.083	2.928	55.174	1.083	2.928	55.174	1.911	5.164	55.174

Extraction Method: Principal Component Analysis.

Table 2: ELLMTAS Results of Factor Analysis Total Variance Explained

In order to have a realiable scale, the results must show a result which should be higher than 0.70 and more, whereas, ELLMTAS scale has 0.90 Cronbach Alpha level [Tan, 14]. The reliability of the six sub-dimensions of the scale is shown below in Table 3.

	Sub-dimensions	**Coefficient of reliability**
1	To believe that mobile technologies facilitate English language learning	0.87
2	To believe that mobile technologies increase students' motivation with regard to English language learning	0.84
3	Unwillingness to utilization mobile technologies in English language learning	0.82
4	To believe that mobile technologies improve writing skills in English language learning	0.78
5	To believe that mobile technologies are helping students to acquire high-level thinking skills in English language learning	0.75
6	To believe that mobile technologies are very effective in English vocabulary learning	0.78

Table 3: Coefficient of Reliability of ELLMTAS six Sub-Dimensions

As it seen above, the co-efficient of reliability is higher than 0.70, and all dimensions are reliable. The factors and the values of the factor loads in terms of ELLMTAS are shown in Table 4.

Item No – Items	Fac. I	Fac. II	Fac. III	Fac. IV	Fac. V	Fac. VI
To believe that mobile technologies facilitate English language learning						
9 If mobile technologies were combined with a cooperative learning method, English language learning would become easier.	.456					
13 Its extremely useful in terms of learning English curriculum topics using one-button text messages via mobile technologies.	.551					
17 It's easier to access English language learning sources via mobile technologies.	.657					
19 It's easier to learn English words via mobile technologies.	.594					
20 English language learning becomes easier when the videos are available via mobile technologies.	.666					
21 Mobile technologies facilitate the learning of sounds in English language pronunciation.	.727					
22 Mobile technologies facilitate the learning of reading skills on the part of English language learners.	.695					
23 Through the visual materials of mobile technologies, the concepts of the English language become more significant.	.630					
To believe that mobile technologies increase students' motivation with regard to English language learning	Fac. I	Fac. II	Fac. III	Fac. IV	Fac. V	Fac. VI
41 Mobile technologies provide an unlimited educational opportunity for English language learners.		.477				
49 English language learning via mobile technologies will help students to develop their creativity by using slide shows.		.579				
56 Students can decide where, when, and how to access the English Language via mobile technologies.		.647				
57 If mobile technologies are used in English reading comprehension courses, students will be more encouraged to learn foreign language.		.675				
66 English language learning would be more permanent if English courses installed a Moodle which used video.		.562				
72 If English could be taught via mobile technologies through videos, it would enhance students' English Language Learning motivation.		.413				
81 Mobile technologies are improving in terms of shy students' motivation, thereby helping them to express themselves better in English language classrooms.		.714				
82 Mobile technologies help language teachers to teach English more easily.		.705				
Unwillingness to use mobile technologies in English language learning	Fac. I	Fac. II	Fac. III	Fac. IV	Fac. V	Fac. VI
35 People are moving away from using language books because of mobile technologies.			.582			
37 English language reading comprehension and writing topics are not investigated by students via mobile technologies.			704			
38 Mobile technologies are unnecessary to use mobile technologies in English language learning.			.714			
42 Mobile technologies encourage students to play mobile games instead of learning English.			.649			

43 The use of mobile technologies will encourage students to plagiarise because of the homework research that is required.			.599			
59 Mobile technologies create problems in terms of the activities carried out in English classrooms.			.568			
62 The use of mobile technologies has a negative effect on classroom discipline in terms of English language learning.			.653			
69 Students cannot be expected to achieve an adequate level via mobile technologies.			.706			
74 Students' English grammar levels do not develop to an adequate level via mobile technologies.			.625			
To believe that mobile technologies are improving writing skills in English language learning	Fac. I	Fac. II	Fac. III	Fac. IV	Fac. V	Fac. VI
1 Mobile technologies are very effective when learning how to write supportive sentences properly in English.				.482		
5 Mobile technologies are very effective for accessing course materials.				.662		
6 Mobile technologies are very effective for the students' topic sentence writing.				.826		
7 Mobile technologies are very effective for the students' paragraph writing.				.830		
To believe that mobile technologies are helping students to acquire high-level thinking skills in English language learning	Fac. I	Fac. II	Fac. III	Fac. IV	Fac. V	Fac. VI
10 Mobile technologies are improving the level of communication in the classroom.					.90	
24 Mobile technologies create multi-faceted thinking skills in the process of English grammar learning.					.610	
25 If English language teachers include a behaviouristic approach in their lessons, it will make the course material permanent.					.568	
30 Mobile technologies will help students gain critical thinking skills during the English course.					.426	
To believe that mobile technologies are very effective in English vocabulary learning	Fac. I	Fac. II	Fac. III	Fac. IV	Fac. V	Fac. VI
31 Mobile technologies allow students to learn more vocabulary in the English classroom.						.467
32 Students' vocabulary learning speeds up because of the Office software which mobile technologies support.						.517
33 Students' vocabulary learning needs would be eliminated by using mobile technologies.						.501
34 Mobile technologies help students to access multiple sources to find out the meanings of the words used in English classes.						.571

Table 4: ELLMTAS Factors and Factors Load Values

3.2 The university students' general attitudes for English LanguageLearning via Mobile Technologies

Mean scores of university students' attitudes related to English Language Learning via Mobile Technologies were (M=3.99, SD=.717) for "To believe that mobile technologies facilitate English Language Learning", (M=3.92, SD=.685) for "To

believe that mobile technologies are increasing students' motivation for English Language Learning",(M=2.59, SD=.768) for "Unwillingness to use mobile technologies in English Language Learning", (M= 4.10, SD=.731) for "To believe that mobile technologies are improving writing skills in English Language Learning", (M=3.84, SD=751) for "To believe that mobile technologies are helping students to acquire high-level thinking skills in English Language Learning" and (M= 3.99, SD=. 754) for "To believe that mobile technologies are very effective in English vocabulary learning". The survey of students' attitudes found that the opinion of whether mobile technologies facilitate English Language Learning fell within the boundaries of "agree". This seems to show that the university students studied have positive attitudes towards the use of mobile technologies in English language learning. Additionally, students have positive towards acquiring self-motivation, vocabulary, phonetics and high-level thinking skills in English Language Learning via mobile technologies. Especially, participants strongly agree to the use of mobile technologies in order to assist their acquirement of writing skills in ELL. Another positive student attitude is that they believe that they need mobile technologies to help them in language classrooms.

3.3 University Students Departmental Relations with the regard of attitudes in English Language Learning via Mobile Technologies

The descriptive statistical results of students' attitudes of English language learning via mobile technologies are presented by department in Table 5.

Dimension	Departments	N	M	SD
1. To believe that mobile technologies facilitate English language learning	Engineering	70	4.04	.698
	Education	119	3.97	.752
	Law	86	3.98	.687
	Total	275	3.99	.717
2. To believe that mobile technologies increase students' motivation for English language learning	Engineering	70	3.98	.721
	Education	119	3.91	.704
	Law	86	3.87	.632
	Total	275	3.92	.685
3. Unwillingness to use mobile technologies in English language learning	Engineering	70	2.57	.787
	Education	119	2.49	.738
	Law	86	2.74	.779
	Total	275	2.59	.768
4. To believe that mobile technologies are improving writing skills in English language learning	Engineering	70	4.15	.682
	Education	119	4.06	.768
	Law	86	4.13	.720
	Total	275	4.10	.731
5. To believe that mobile technologies are helping students to acquire high-level thinking skills in English language learning	Engineering	70	3.92	.789
	Education	119	3.89	.719
	Law	86	3.70	.753
	Total	275	3.84	.751
6. To believe that mobile technologies are very effective in English vocabulary learning	Engineering	70	4.06	.861
	Education	119	3.94	.739
	Law	86	4.01	.682
	Total	275	3.99	.754

Table 5: University Students Departmental Relations with the regard of attitudes in English Language Learning via Mobile Technologies

Results show that Engineering, Law and Education departments' students' attitudes with the regard of using these technologies in this course seen as affirmative. In order to identify departmental differences for students' attitudes, a One-Way ANOVA was performed and the results presented in Table 6.

Dimension	Source of Variance	Sum of Squares	Sd	Mean Square	F	P	Explanation
1.To believe that mobile technologies facilitate English language learning	Between Groups	.211	2	.105	.204	.816	P>0.05 Insignificant
	Within Groups	140.74	272	.517			
	Total	140.95	274				
2. To believe that mobile technologies are increasing students' motivation for English language learning	Between Groups	.472	2	.236	.500	.607	P>0.05 Insignificant
	Within Groups	128.37	272	.472			
	Total	128.84	274				
3. Unwillingness to use mobile technologies in English language learning	Between Groups	3.120	2	1.560	2.671	.071	P>0.05 Insignificant
	Within Groups	158.89	272	.584			
	Total	162.01	274				
4. To believe that mobile technologies are improving writing skills in English language learning	Between Groups	.443	2	.222	.413	.662	P>0.05 Insignificant
	Within Groups	146.00	272	.537			
	Total	146.45	274				
5. To believe that mobile technologies are encouraging students to possess high-level thinking skills in English language learning	Between Groups	2.415	2	1.207	2.154	.118	P>0.05 Insignificant
	Within Groups	152.43	272	.560			
	Total	154.85	274				
6. To believe that mobile technologies are very effective in English vocabulary learning	Between Groups	.670	2	.335	.587	.557	P>0.05 Insignificant
	Within Groups	155.38	272	.571			
	Total	156.05	274				

Table 6: The determination of students' attitudes of using mobile technologies in English language learning by department

As it can be seen above, there was no meaningful difference between the departments in terms of students' opinions about the use of mobile technologies in English language learning. The result obtained for this condition was found to be ($F_{(2;\ 272)} = .204$, $p > 0.05$). It indicates whether there is a meaningful difference between departments in terms of attitudes in English language learning together with mobile technologies.

3.4 Students' Attitudes towards English Language Learning via Mobile Technologies in Concerning Grades

A t-test was implemented to reveal whether there was a meaningful difference in the university students' attitudes according to their grade in table 7.

	Grades	N	M	SD	Df	T	P	Explanation
1. To believe that mobile technologies facilitate English language learning	1	144	4.02	.761	.273	580	.562	P>0.05
	2	131	3.97	.667				Insignificant
2. To believe that mobile technologies are increasing students' motivation for English language learning	1	144	3.91	.736	.273	-107	.915	P>0.05
	2	131	3.92	.628				Insignificant
3. Unwillingness to use mobile technologies in English language learning	1	144	2.54	.768	.273	-969	.333	P>0.05
	2	131	2.63	.770				Insignificant
4. To believe that mobile technologies are improving writing skills in English language learning	1	144	4.13	.755	.273	608	.544	P>0.05
	2	131	4.07	.705				Insignificant
5. To believe that mobile technologies are helping students to acquire high-level thinking skills in English language learning	1	144	3.89	.799	.273	1,191	.235	P>0.05
	2	131	3.78	.694				Insignificant
6. To believe that mobile technologies are very effective in English vocabulary learning	1	144	4.01	.813	.273	466	.642	P>0.05
	2	131	3.97	.686				Insignificant

Table 7: Students' attitudes towards English language learning via mobile technologies in relation to grade

In Table 7, the first grade students' attitude result for "To believe that mobile technologies facilitate English language learning" was (M=4.02, SD=.761) and the result for the second grade students was (M=3.97, SD=.667) (t=580, p>0.05). This shows us that the second grade students' results are lower than those of the first grade students. Although the first grade students' results are higher than those of the second grade students, there was no meaningful distinction in their attitudes. Again, the first grade students' attitude results for "To believe that mobile technologies are increasing students' motivation for English language learning" was (M=3.91, SD=.736), while the second grade students' attitude result was found to be (M=3.92, SD=.628) (t=-.107, p>0.05). The results obtained show that there was no meaningful distinction in students' attitudes and students' motivation in terms of their grades.

Whereas, the first grade students' attitude results for "Unwillingness to use mobile technologies in English language learning" was (M=2.54, SD=.768), the second grade students' attitude result was found as (M=2.63, SD=.770). Nevertheless, the outcomes show that the grade difference is not meaningful for their unwillingness to use mobile technologies in English language learning (t=-969, p>0.05). At the same time, the first grade students' attitudes scores for "To believe that mobile

technologies are improving writing skills in English language learning" was (M=4.13, SD=.755), while the second grade students' attitudes was found to be (M=4.07, SD=.705) (t=608, p>0.05).

In light of the above, results demonstrates us that there is no meaningful distinctness in university students' attitudes whether mobile technologies in English language learning has developed their writing, high-level thinking and vocabulary learning skills, in terms of grade.

4 Discussion

In this study, it has developed a reliable and valid scale to determine students' attitudes towards mobile enabled English course for first-graders at Cyprus International University. The findings of attitude scale towards English shows that the scale has appropriate qualifications. Also the factors which the scale owned specified by new English program attitudes and values matched with the curriculum (see Table 2).

In this sense, the developed ELLMTAS scale has six-dimensions and the dimensions of this scale were different than other studies. According to this study, the scale was developed with different dimensions and scope of work which were compatible with new English curriculum. This situation reveals the diversity and necessity of this scale. With the developed scale of new English possible program, the use of mobile technology in higher education and determining students' beliefs, attitudes and emotions shed light on teachers and researchers in sense of helping students in this context. On the other hand, the absence adequate developed attitude scale about mobile technology enabled English language learning in the literature, this scale development will consititude an important reference for the work to be carried out in this context. When it is looked at the literature, similar results are seen from other researchers.[Golshan and Tafazoli, 14] studies also shows that when technology entegrated in language classrooms, students' attitudes toward course and language would become more motivated, enthusiastic and instructions would be more vivid. [Azar and Nasiri, 14] found remarkable findings about this issue and stated that in order to create a positive learning environment in higher education, students need mobile technology in their classes.

[Diemer *et al.*, 12] mentioned that mobile technologies hold the potential to promote student engagement in the form of active and collaborative learning. Positive learning outcomes are likely to accompany by using mobile technologies within university classrooms. In this study, the results show that perception of increased engagement, but on the other hand, it showed a positive effect on students' learning as well.

Departments and grades in EFL classroom had no influence on students' attitudes. This comes as no suprise. Research does not support younger students, so they are familiar with the utilization of mobiles compared to [Celik, 13] results. To conclude, the results suggested that including mobile technology enabled language learning programs and devices into language classrooms would be benefitial for language learners because they are willing to have this teaching-learning tool near their environment. The system of education in higher education at universities do not have technology included curriculum, so this should give a new trend and

implementation in EFL courses at univerisities. There is a pressing need on the side of language teachers to have positive attitude toward mobile technologies and its incorporation in their practices.

5 Conclusion

The relevant literature shows that no scale has yet been developed which is sufficient to identify ELLs' attitudes towards English language learning via mobile technologies. Therefore, it is strongly advised other investigators should do further investigation to identify students' attitudes in this field in the future. This study only included three departments, Engineering, Education and Law; besides which, it was only applied to first and second-graders of university students at Cyprus International University. For further studies, researchers should investigate other departments and grades of this school as well. Then, the results of this study and those of further studies should be compared in order to compile more accurate data. On the other hand, this research is also limited to university students. For further studies, researchers should investigate the attitudes of students at other educational grades as well. Moreover, another important point is that researchers should investigate not only the students', but also the academics' at state schools in this process.

The Ministry of Education and the directorates of universities should develop new curricula of English courses in order to expand students' speaking, writing skills and their vocabulary store with the aid of mobile technologies. Nevertheless, the frequency of the use of mobile technologies should be investigated during the English language learning process and should perform new arrangements. Additionally, as a consequence of the above, researchers should also do different and more in-depth investigations in order to figure out academics' and state school teachers' perceptions of their competence in using mobile technologies as part of the English language learning process.

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