IMPROVING THE PROFESSIONAL ENGLISH SUCCESS OF STUDENTS IN COMPUTER DEPARTMENT BY USING MOBILE TECHNOLOGIES

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Abstract - Students studying in the department of the computer technologies must be able to master in the fields of professional English, technological terms, and error messages generated by various applications very well. In this study, we propose a new approach using mobile technology to maximize students' achievements in this field. The aim of this study is to improve the success of students in professional English classes. The developed mobile system has two screens for lecturers and students to effectively perform and follow the lessons. Course flow has become more functional with this application. The lecturer performs the lessons more effectively and the students pass a more productive educational course. By using the proposed mobile system, the learning period of students was shortened.

Keywords - Computer Sciences, Information Technologies, Vocational Foreign Language, Mobile Technologies

I. INTRODUCTION

Vocational education gives students both the necessary knowledge and the ability to communicate with different cultures and to adapt to the age of information. For this reason, vocational education needs to be completed with vocational foreign language education. To this end, vocational foreign language should be taught to students effectively in vocational high schools to meet the vocational demands of the sector.

Mobile learning methods are thought of as the ability to use mobile technology appropriately to support teaching and learning (Mehdipour&Zerehkafi, 2013). Students can continue to study, regardless of time and place by using mobile technologies (Crescente& Lee, 2011). Furthermore, mobile learning techniques havevarious advantages. The course instructor can share up to date materials about lessons. It is synchronous and spontaneous. Intercommunication between students and the instructor is away from interceptions and is flexible (Ramnath&Kuriakose, 2015) (Naismith et al., 2004).

Students studying in the department of the computer technologies must be able to master in the fields of vocational English, technological terms, and error messages generated by various applications very well. In this study, we propose a new approach using mobile technology to maximize students' achievements in this field. The aim of this study is to improve the success of students in vocational English classes. The developed mobile system has two screens for lecturers and students to effectively perform and follow the lessons. Course flow has become more functional with this application. The lecturer performs the lessons more effectively and the students pass a more productive educational course. At the same time, the lecturer can monitor the whole class quickly and efficiently when it is necessary. Examinations can be done on topics which are found necessary.By using the proposed mobile system, the learning period of students was shortened.

The rest of the paper is organized as follows. In Section 2, literature reviewabout mobile technologies in teaching programming languages was made. Ourproposed system was expressed in Section 3. Section 4 contains the results of the proposed system. The research is concluded by Section 5.

II. LITERATURE REVIEW

There are various previous study which underline the significance of mobile technologies in vocational teaching. (Tillmann et al. 2012a, Tillmann et al. 2012b). It is well known that mobile learning consolidates the processes of teaching and learning (Mehdipour&Zerehkafi, 2013). Previous researches emphasize the advantages of using mobile technologies in the process of teaching and learning (Crescente& Lee, 2011). Mobile applications are frequently used by researchers in teaching and learning process (Burston, 2011, Hsu & Ching, 2013, Wu, 2015, Rau et al, 2006). There are some studies which represent thet smart devices increase learning motivation of students and allow to intra-group interaction (Bromley, 2012). Some researches shows major developments and research studies that examined the use of mobile systems in education (Janice et al., 2008). In addition to these, it was also explained that there is still room for improvement in this area (Hsu, &Ching, 2013, Göktepe, &Elitok, 2017).

II. PROPOSED SYSTEM

Proposed system contains 2 different interfaces for lecturer and students. Lecturer screen contains

different amenities to manage course scope and the educational process (Figure 1).

In the student screen; student can follow the course materials and homework. Instant communication with the lecturer can also be done Figure 2.

Figure 1. Lecturer screen of mobile application.

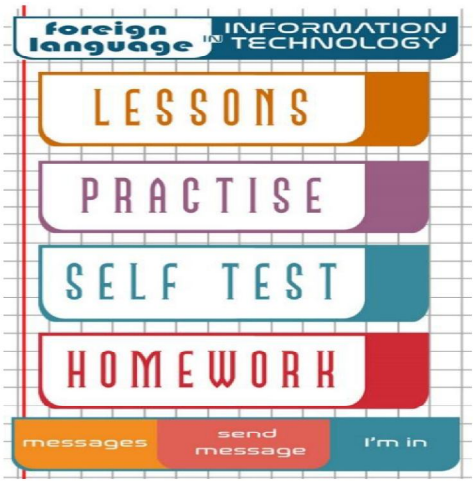

Figure2. Student screen of mobile application.

User id and password are required to log in to the application. User id is their school number for students. Android Studio software was used to build thismobile application. Visual elements were designed with Adobe Photoshop CS6.

3.1 Lecturer Screen

Lecturer performs the following actions using this application:

- Lessons: Lecturer can add lesson materials, manages them and shares with the class. Videos which must be followed are sharing by server links.
- Roll Call: In this form, automaticroll-call of students was done by the application. Roll call results can be seen by the lecturer (Figure 3). Moreover, the lecturer can see the number of participants and absent students. Brief information about the student such as continuousness and exam scores can also be seen in this screen.
- Dictionary: Lecturer forms a vocabulary dataset about technical words, phrases, abbreviations, and error messages. The application generates self-tests using this dataset in the student screen.
- Exam: Lecturer can send a prepared exam with this button to the whole class.

3.2 Student Screen

With the student screen of this mobile application (Figure 2) course materials were given from simple to complex. Students can benefit from the following amenities on this screen:

- Lessons: Students can study the lesson notes on this screen. This feature give chance to students to prepare and repeat the lessons.Thus, after the course, they can correct the inadequacies.
- Practice: Student can interconnect with other students when he or she needs to practice. With this form, 2 students can make a speed round practice about word and phrases.
- Self-Test: Students can make self-test to improve on the dictionary that the lecture formed (Figure 4).
- Homework: In this form, homework shared by the lecturer can be seen.

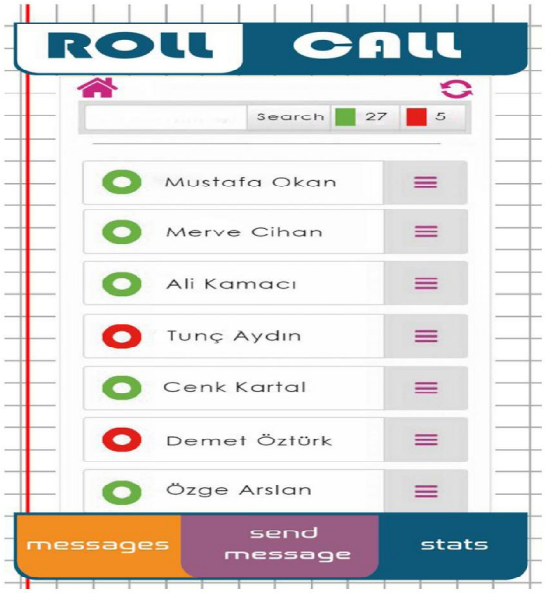

Figure 3. Roll call screen for a course.

IV. RESULTS

Various encouraging results were obtained with the use of proposed mobile application. Students have found chance to prepare for the topic before the lesson. They also repeated the lessons regardless of time. They improved themselves on the dictionary that the lecturer formed about the topics of the course. Encountered problems were fixed by communicating to the lecturer through this application.

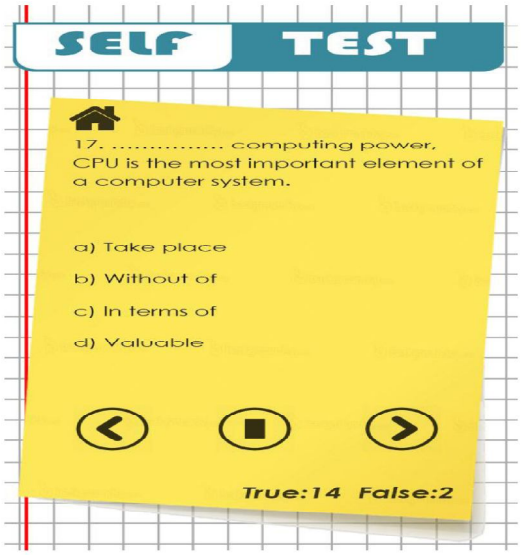

Figure 4. Self-test screen for students.

According to the usage results of this mobile application, it can be figured out that the participants were willing to learn more. Unlike the former mold of teaching, class administration was maintained with more success. Student motivation and performance were raised. Average exam scores of students for educational years of 2016 and 2017 are given in Table 1.

Table 1. Average grades of students for years.

Educational Years		2015	2016	2017
Average Grades of Students …	…In Mid-term Exams	57,51	56,98	68,92
	…In final exams	55,87	53,02	67,12

This mobile system has been applied to students studied in 2017.We applied this mobile application to a class of 32 students. The number of non-participating students to the course can be seen in Table 2. It can be seen from this table that, students were more willing to participate to the lessons.

CONCLUSION

Vocational education needs to be completed with vocational foreign language education. Vocational foreign language should be taught to students efficiently to meet the vocational demands of the sector. Thus, we proposed a new mobile application to maximize students' achievements in this field.Using mobile technology in foreign language education allows students to present more interest in the course. In this way, attainments of students were increased.

Table 2. The number of non-participatingstudents for educational years 2015, 2016 and 2017.

Weeks	Number of non-participating students		
	2015	2016	2017
1	4	2	2
2	1	4	1
3	0	2	0
4	3	3	0
5	1	4	1
6	6	5	0
7	3	1	0
8	7	7	2
9	4	3	2
10	7	7	2
11	2	8	3
12	3	5	1
13	5	7	2
14	6	4	3

With this application, the course and educational process were managedefficiently by the lecturer. With the use of statistical data, it becomes easier to see the change in participation and performance of students.

We can say as a conclusion that, use of mobile technologies have reached to a significant point that supports vocational foreign language education in schools.

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