THE INFLUENCE OF BLENDED LEARNING MODEL ON DEVELOPING LEADERSHIP SKILLS OF SCHOOL ADMINISTRATORS

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ABSTRACT

The usage of b-learning approach on in-service education activities in Turkish education system are getting more and more important these days. Generally, traditional education and computer based education applications are used on in-service education activities. Blended learning (b-learning) combines online learning with face-to-face learning. The goal of blended learning is to provide the most efficient and effective learning experience by combining learning environments. The purpose of this research is to find out the effect of b-learning approach on developing administrators' leadership skills. To identify what the school administrators' educational needs and to know their existing leadership skills, needs assessment questionnaire was applied to 72 school administrators who were selected from 33 primary schools in 11 region of Ankara capital city. According to the descriptive statistical analysis results of questionnaire, in-service training programme was prepared for the development of school administrators' leadership skills. The school administrators were separated into three groups as computer based learning (CBL) (25 participants), blended learning (BL) (23 participants) and traditional learning (TL) (24 participant) groups. These groups were trained separately with these three different learning environments by using the in-service training programme. According to the results of pre-test, post test and achievements score means, it was observed that BL groups' score is the highest when compared to TL and CBL groups. As a result of this research, in terms of achievements and effectiveness, b-learning was found to be the most effective learning environment when compared to the others. Both learners and tutors findings strongly suggest that blended learning is available alternative delivery method for inservice education activities.[1]

Keywords: Blended Learning, e-Learning, Information Technology, In-service education

1 INTRODUCTION

Blended Learning (b-Learning or Hybrid Learning) consists of the combination of e-Learning and traditional education approach. Blended learning combines online learning with face-to-face learning. The goal of blended learning is to provide the most efficient and effective learning experience by combining different learning environments. b-Learning stands in the forefront in respect of interactivity with target learner group, enriching learning process and integration of technology into education [1,2,3,16,21].

E-learning has had an interesting impact on the learning environment. Blended learning is the most logical and natural evolution of our learning agenda. It suggests an elegant solution to the challenges of tailoring learning and development. It represents an opportunity to integrate the innovative and technological advances offered by online learning with the interaction and participation offered in the best of the traditional learning [20].

The ground of blended learning approach constitutes the powerfull side of traditional education and computer based educations instead of using one or the other on its own.

Basic characteristics of Blended learning which reflects the values of 21st century education are [2];

- Providing a new way of learning and teaching,
- Teaching how to learn,
- Creating digital learners,
- Be more economical,
- Focusing on technology and communication
- Improving project-based learning,
- And improving teaching process.

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Blended Learning practices provide project based learning opportunities for active learning and interaction among learners and especially provides as a way to meet the educational needs of the learners. Blended learning programs may include several forms of learning tools, such as real-time virtual/collaboration software, self-paced web-based courses, electronic performance support systems (EPSS) embedded within the learning-task environment, and knowledge management systems. Blended learning contains various event-based activities, including face-to-face learning, e-learning, and self-paced learning activities. Blended learning often occurs as a mixture of traditional instructor-led training, synchronous online training, asynchronous self-paced study, and structured task based training from a teacher or mentor. The aim of blended learning is to combine the best of classroom face-to-face learning experiences with the best of online learning experiences. Overall, blended learning refers to the integration (or the so-called blending) of e-learning tools and techniques with traditional face-to-face teaching delivery methods. The two important factors here are the time spent on online activities and the amount of technology utilized, see Concept of Blended Learning figure 1 below: [3,4,6,7,8,9,10,11,12,15,16,19].

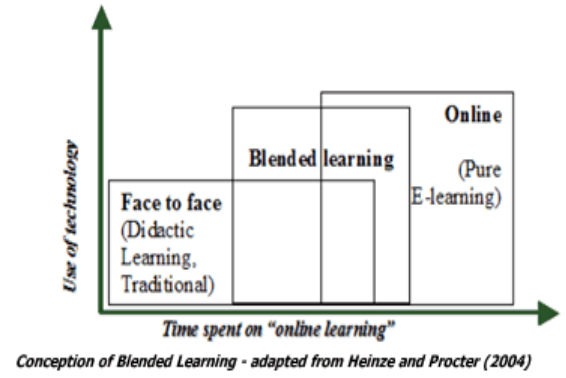

Fig. 1: Concept of Blended Learning

If two or more of these learning environments which are stated above are used to teach an educational objective, it can be said that blended learning is realized. However blended learning has more meaning than showing a web page during a lesson in the classroom and using information immediately in the web page to explain the lesson. Blended learning is a learning of environment which combines environments of face to face learning and web-based distance learning.

Blended learning overcomes this limitation of an e-learning only approach [12]. Today blended learning primarily functions as a replacement for extension of face-to face environments. For instance, it might be used to foster learning communities, extend training events, offer follow-up resources in a community of practice, access guest experts, provide timely mentoring or coaching, present online lab or simulation activities, and deliver prework or supplemental course materials. While such uses may be unique and engaging, they are not exactly novel [13].

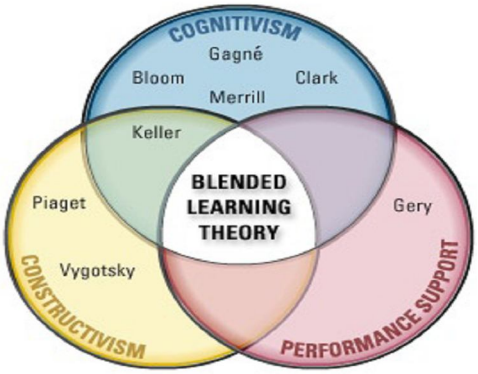

Figure 2: A Blend of Learning Theories

By applying learning theories of Keller, Gagné, Bloom, Merrill, Clark and Gery, (see Figure 2) five key ingredients emerge as important elements of a blended learning process (see Figure 2):

1. **Live Events:** Synchronous, instructor-led learning events in which all learners participate at the same time, such as in a live "virtual classroom."
2. **Self-Paced Learning:** Learning experiences that the learner completes individually, at his own speed and on his own time, such as interactive, Internet-based or CD-ROM training.
3. **Collaboration:** Environments in which learners communicate with others, for example, e-mail, threaded discussions or online chat.
4. **Assessment:** A measure of learners' knowledge. Pre-assessments can come before live or self-paced events, to determine prior knowledge, and post-assessments can occur following live or self-paced learning events, to measure learning transfer.
5. **Performance Support Materials:** On-the-job reference materials that enhance learning retention and transfer, including PDA downloads, and printable references, summaries, and job aids.

2 PURPOSE

The purpose of this research is to find out the effects of b-learning approach on developing school administrators' leadership skills.

3 RESEARCH DESIGN

To determine what the school administrators' educational needs on leadership skills, needs assessment questionnaire was applied to 72 school administrators who were selected from 33 primary schools in 11 regions within Ankara capital city. According to the results of this questionnaire, in-service

training programme on developing school administrator's leadership skill was prepared.

The most needed leadership skills of school administrators according to the results of needs assessment were determined as human relations in administration, basic management skills for school principles, job satisfaction at organizations and motivation.

After that, content and learning activities of "School Administrators Leadership Skills Development In-service Programme" were prepared. Beside that course notes as training materials were prepared to be distributed to the participants in the form of CDROM and printed documents.

The school administrators were separated into three groups as Computer Based Learning (CBL) (25 participants), Blended Learning (BL) (23 participant) and Traditional Learning (TL) (24 participant) groups. These groups were trained according to three different methods by preparing education programme. The groups were given two days course.

Before the in-service training the school administrators who were in BL group reached the digital content and studied learning activities included in "School Administrators Leadership Skills Development In-service Programme" which is prepared by using Moodle Learning Managing System Softwware and published on http://beg.meb.gov.tr:8088/ website.

The school administrators who are in the BL group were entered to the http://beg.meb.gov.tr:8088/ webpage by using their usernames and passwords given to them three weeks ago, before the in-service training. The interface of the website is shown in the Fig. 2. The school administrators in this group shared information, chatted, and studied activities with their colleagues and subject area specialist about the content and learning activities included in the site whenever they want. As online learner, school administrators build their confidence and learning processes as they get used to working independently online. Blended learning activities included online knowledge gathering and construction in teams or groups, publishing of electronic content, interactive elements like online brainstorming, discussion, several forms of feedback, evaluation and assessment, as well as other blended learning techniques. Lecturers posted messages to the BL group as a whole and to each administrators individually to meet their need for support. They posted explanation to guide learners in more complex tasks, encouraged them to communicate, to do their individual assignments, and to use the Moddle platform tools. They have at their disposal to facilitate their work. Tutors controlled and marked the online assignments, filled in learners' performance reports, and write feedback on their performance in their online portfolios. Lecturers followed school administrators learning improvements and gave encouragement when motivation level began to falter. And after that this group was trained by lecturer as subject area specialist. Lecturer trained this group by using face to face education, computer based education and online training website prepared by moodle software.

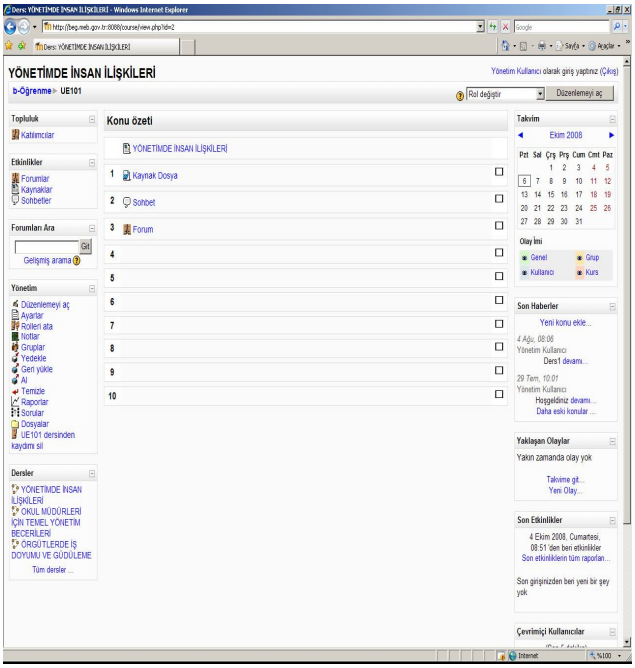

Figure. 3: The Moodle interface

On the other hand; all the in-service training content and activities were taught to CBL group by lecturer with aid of computer and projector. Finally, TL group was trained in a traditional way by using blackboard

Multiple choice test which was made up of 20 questions were applied to the groups to investigate their achievements on leadership skills. This test was shown to content experts to identify its content validity. To find out the statistical significant difference among three groups score means, one-way Anova and Scheffe test were used. This test was applied to all groups as pre-test at the beginning and as post-test at the end of in-service training [5]. Blended Learning Model which was used on the research process showed Figure 3.

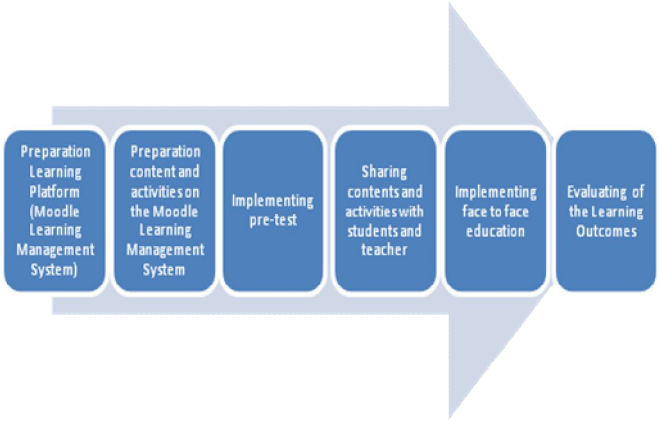

Figure. 3: The Process of Blended Learning Model

4 RESULTS

When three groups' pre-test score means were compared, it was seen that there were significant differences among them (F (2-69)=53,350, p<.01). (Table I).

Table 1: The One-Way Anova Results on the Difference Between Groups According to Pre-Test Scores

Source of Variance	Sum of Squares	df	Mean Square	F	Sig.	Mean Difference
Between groups	278,668	2	139,334	53,350	,000	BDE-KÖ, GÖ-KÖ
Within groups	180,207	69	2,612			
Total	458,875	71				

When three groups were statistically compared according to data, BL groups' pre-test score mean ($\bar{X}$=12.87) was found statistically higher than the other two groups (BDE $\bar{X}$=9.12, TL $\bar{X}$=8.29). The reason of this might be that BL group was more ready and successful than others. Since they studied earlier all content and activities which were prepared with Moodle software and published on internet.

Table 2: The One-Way Anova Results on the Difference Between Groups According to Post-Test Scores

Source of Variance	Sum of Squares	df	Mean Square	F	Sig.	Mean Difference
Between groups	544,539	2	272,270	90,610	,000	BDE-KÖ, BDÖ-GÖ, GÖ-KÖ
Within groups	207,336	69	3,005			
Total	751,875	71				

When school administrators' post test score means were compared among three groups, it was found that there was a significant difference between post test score means. (F (2-69)=90,610, p<.01). (Table II). There was also statistically significant differences among BL group's post test score mean ($\bar{X}$=17.35), CBL group's post test score mean ($\bar{X}$=12.44) and TL group's post test mean ($\bar{X}$=10.79). Especially, BL group administrators' post test score mean is the highest of all.

The difference between school administrators' pre-test and post test scores was being calculated to identify their achievement scores. It was seen that there was a meaningful difference among the groups' achievement score means (F (2-69)=18.086, p<.01) (Table 3). BL group's achievement means ($\bar{X}$=4.48) has been higher than CBL ($\bar{X}$=3.28) and TL ($\bar{X}$=2.50) groups' achievement means.

Table 3: The One-Way Anova Results on the difference Between Groups According to Achievement Scores (Difference between pre-test and post test)

Source of Variance	Sum of Squares	df	Mean Square	F	Sig.	Mean Difference
Between groups	46,540	2	23,270	18,086	,000	BDE-KÖ, GÖ-KÖ
Within groups	88,779	69	1,287			
Total	135,319	71				

It was seen that BL group's pre-test, post test and achievements score means were the highest when compared to TL and CBL groups. The reason of this might be that BL group might be more ready than others since they studied content and activities which were published with Moodle software before other groups. They also experienced both face to face and computer based learning environments.

5 CONCLUSION

The influence of b-learning model on developing leadership skills of school administrators was more effective than computer based education and traditional learning.

As a result of this research, in terms of time, cost and effectiveness, b-Learning was found to be the most effective method to in comparison with the other approaches. Particularly, it appeared that it is necessary to use more b-Learning approach in in-service training of administrators and teachers. It is required effective usage of b-Learning approaches for integrating education with information technologies, enriching learning-teaching process, implementing face to face education, providing computer based learning, realizing hands on learning and individualizing the learning.

At the research blended-learning arrangements involved e-mentoring or e-tutoring. The role of the e-mentor/tutor is critical as this requires a transformation process to that of learning facilitator. Being teachers and online tutors has introduced beneficial qualitative changes in teachers' roles, but it has also meant a quantitative increase in the number of hours dedicated to learners. Lecturers less spent time in face-to-face classes than the online environment (Moddle platform).

Moodle programme which is used blended learning approach has great potential to create a successful blended learning experience by providing a plethora of excellent tools that can be used to enhance conventional classroom instruction, in hybrid courses, or any distance learning arrangements [18].

Finally, lecturers identified learners who may be experiencing particular problems and help them address their weakneses in remedial work sessions if necessary.

We observed that b-Learning opportunities for teaching objectives make learning entertaining, funny, lasting and economics as an effective way. In this sense, according to us trainers should use b-Learning environment for the integration of ICT effectively in learning and teaching.

Last year, the Turkish Ministry of National Education In-service Training Department implemented more than 700 in-service training courses. The usage of b-Learning methodology especially in these in-service trainings will enrich and support the learning-teaching process of those in-service training. More projects about the usage of b-Learning in-service training should be supported and performed.

Particularly, the initiatives of the Turkish Ministry of National Education for improving schools information technologies and internet infrastructure, distributing authoring software to the teachers, developing education portal and its content, moodle and similar learning management system software should be used for supporting b-learning usage in-service training. School administrators state that b-learning approaches will be used more effectively in the class. All school administrators' comments regarding the blended course were positive.

It is cited as below that the positives of the blended learning course activities which are used at this research;

- Improvement in the quantity and/or quality of the communications among the school administrators in discussion board or online groups and face to face activities in the classroom.
- Good cooperative learning activities
- Blended learning were more effective than classroom alone. Higher learner value and impact; the effectiveness greater than for nonblended approaches. Learners like b-learning appraoches.
- Accessibility to b-learning content and activities rapidly (every time, everywhere)
- Improved relationships between tutors and students
- The immediate feedback that could be given school administrators
- Flexibility in scheduling and timetabling of course work.
- An increase of the time actually spent on face-to-face in classroom
- Cost effectiveness for both the accrediting learning institution and the learner

The increased cost, reduced training time, and the ability to easily update training materials offer additional compelling reasons for educators to embrace blended learning [22].

At the research there are some problems according to school administrators opinions cited as below:

- Some technical web, internet problems access to moddle platform.
- The failure of online Power Point presentation of lecture material to meet some school administrators' expectations.
- Some school administrations lack of enthusiasm being in a blended learning course.
- Limited knowledge in the use of technology.
- Blended learning takes time for both the instructor and learner to adapt to this relatively new concept in delivering instruction.

Especially, it can be concluded that all the in-service training should be taught more effectively by using b-Learning approach. The technological leadership role of the school administrations is very important for the success of b-Learning approach.

The feature of blended learning models has a vital importance for applying individual learning and active learning. According to some authors "a blend is integrated strategy to delivering on promises about learning and performance [17].

In sum, both learners and tutors findings strongly suggest that blended learning is available alternative delivery method for courses. In supporting blended learning, especially in-service education courses remains both a national leader in the effective use of technology for teaching and learning, and a pioneer in identifying the right mix of face-to-face and online communication practices that will enhance learning effectiveness [19]. The result of this research backs up all of these. To develop the technological leadership of school administrators, b-learning approaches should be used effectively. Blended learning offers opportunities for both in-service school administrators, in-service teachers and their learners.

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