

A SURVEY ON THE EFFECTIVENESS OF B-LEARNING AGAINST CHALLENGES ARISEN FROM E-LEARNING ACROSS SECONDARY SCHOOLS OF SARI CITY-DISTRICT 2

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Abstract

A research has been done aimed study on the rate of effectiveness of blended learning against electronically learning challenges of case study of guidance schools in region 2 in sari. On this bases , mean while comprehensive review on relative subject literature , blended learning and electronic learning challenges some subjects have been gathered and considered and has collected information's via questionnaire . Thesequestionnaire have been distributed among students of guidance schools in training and education in region 2 in Sari. Which include 1700 people, and the researcher has studied 92 boys and 187 girls out of 279 persons as a samples, have filled the questionnaires. Alfa test results, confirmed the used instruments permanence, and then via SPSS software has been discussed and analysis via T test. the variable average of blended learning effect against electronic learning challenges equals 3.5177 out of 5 means 62.94 out of 100 . As a result, the average of this variable in view of repliers is more than theatrical average means 3. According to that sig value is less than 0.05, so T test results show that blending learning against electronically learning is effective. At the end of the research, while presenting the detailed results and findings, useful suggestions and also suggestion related to continuing the similar researches have been presented, in future.

Keywords: Effectiveness, Blended learning, electronically learning challenges, Resignations Contacts, the lack of face to face encounters, team works.

Introduction

In the current era, the amount of information and knowledge kept increasing, exploding every day that this will increase learners' confusion. However, the rapid rate of innovation in targeted and applied technology as well as learning is one of the most challenging cases. Yet, in some cases faced with indifference, economic poverty, extensive information, rapid changes, lack of time and space limitations, the learners would not be allowed to address performing traditional classes. With huge advancement in technology, popularity and effectiveness of e-learning keep increasing day by day. Despite the development of virtual education, the major problem is the lack of face to face encounters, group-social activities, and learner's negative impact on the effectiveness and keeping the learner satisfied (Attaran, 2004). With the development of information technology and Penetration of telecommunications equipment into the community, training tools and methods have evolved as well. The development of these tools and techniques are in a way that anyone at any time and place with his/her own facilities and in a timeframe that is specified engage in learning (Arabgari, 2004). In the years not too distant, distance education was posed. Such

an education has its own features, including advantages and disadvantages. Correspondence training was initially available at training era, and the only way for communication was the use of letters or correspondence (Attaran, 2004). With the advancement of technology and more importantly not expensive cost of using the technology, using more new tools for knowledge transfer was made. With emergence of internet, this phenomenon was followed in a more serious manner whereby tools and methods and standards were posed for e-learning so that newer terms appeared in this context. Indeed, it can say that e-learning is the use of knowledge transfer tools through internet so as to transfer knowledge and information. Learning through virtual education has led to challenges including Possibility of withdrawal of training audiences, lack of face to face encounters, lack of learner's presence in team works (Asgarpoor, 2002).

Problem statement

Education system in the country has always been a special place among officials. In this regard, criticism by scholars and experts in the field of research, education and media circles can be taken into consideration. Some assume that the problems in education system rooted in the long past time, not that much can believe the change appeared in recent years. Some acclaim that in the education systems all around the world, however, the problems seen in the past or even today, the methods helped to resolve them where a comprehensive study and planning as well as accurate implementation of plans and approaches relevant with education system came effective to Arise methods to resolve any problem appeared. Not desired efficiency, Lack of up-to- date teaching methods, little regard to teacher training institutions as providers of human resource of the country's cultural institutions, emergence of new technology and information without plan, Parents' and teachers' lack of readiness to accept modern technologies, all require to conduct more research to get to know about the strengths and weaknesses of such innovation and technology so as to getting adapted with the changing environment. E-learning, in a plain language, means training process in the context of electronic communication. However, e-learning has brought about changes in training technology using interaction between learners and teachers, it is long time assumed that e-learning starts to evolve. Focus on e-learning process, unlike traditional education required for learners, not pedagogical content, because, learners have to attend under supervision of instructors to evolve pedagogical content. E-learning has caused science goes beyond, not experienced the education in the past (Ahmadian, 2002). E-learning provides the possibility of independent learning of time and place for learners. E-learning can be based on CD-ROM, network, intranet and/or internet. Learning in e-learning systems follows a systematic process, and addressees with any taste and inclination are attracted. Success in E-learning found in presentation, the contents and appropriate distribution (supply) (Rabie, 2004). The advantages of e-learning include independence of education from restriction of specified location, independence of time from restriction of specified time to use multimedia, Possibility of organizing online tests (via the organization site), reduce costs.

Disadvantages of e-learning

Possible avoidance of e-learning addressees, lack of face to face encounters, Lack of learners' involvement in team tasks simultaneously, creation of educational content (Compact Disc) by instructors specialized at technology to provide training. Accordingly, the advantages in e-learning place exactly opposite side of disadvantages in traditional education, where the disadvantages in e-learning place in opposite side of advantages in traditional learning, if any. This is in a way that use of both methods, i.e. blended learning would come effective in pedagogy so that methods would be supplementary of each other

(Arabgari, 2004). Blended learning combines face-to-face learning, e-learning, online group and individual learning.

Blended learning as a new mechanism insists on using a wide variety of learning methods (McDonald, 2006), taking into consideration the selection and use of appropriate tools with respect to learning opportunities to enhance the quality of learning mentioned the basics of Blended learning. This method aims to provide an accurate combination for each of the problems or difficulties seen during learning. For this, blended learning can be effectively an alternative for e-learning. The important point in blended learning is the correct combination of pedagogical tools and methods, which have the highest effect with the least cost. To build a powerful blended program, it can use different types of media and pedagogical methods including classroom training, Web-based training, CDs, Video tapes, Simulation, books, conferences, articles, PowerPoint slides, instructions, brochures (Garrison and Anderson, 2003). With this vision in the integrated teaching that weaknesses in e-learning are filled through personal training, and the weaknesses in Personal Training can be compensated through e-learning, this method is called upon as an integrated method. Further, it should be noted that most of the personal classes would be available, but, with a total boredom, so that due to lack of teaching facilities, such classes lose the necessary attraction (Akkoyunlu. B, & Soylu, 2006). What needs to receive attention in an integrated model is the very notion of quality of learning. This approach in this manner provides several patterns so as to design learning models at different situations to go through providing a desired quality of learning. Such patterns are provided with this feature that conducts the experts in the field of pedagogy towards the planning with the highest quality, mentioned totally relevant with the standards and requirements. Hence, integrated learning is an approach in pedagogical planning, while e-learning is a tool for learning. Quality of learning does not receive a huge attention in e-learning. Yet, planning is used within an organization where not provided with high quality in the context of pedagogy so that there might be another design to give more desired quality in learning (Yang, 2002). The important issue in an integrated education is the very use of learning methodology in designing pedagogical planning where there does not need to apply a blend of electronic and personal equipment. Hence, another type of integrated education, i.e. virtual integrated education can be spontaneously found.

Such patterns can be obtained from the factors affecting standards of pedagogical content used in learning, combination of student-led and professor-led pedagogical planning, personal or virtual form of organizing professor-led sessions and objectives and activities which can be followed in team works as well as the facilities provided for virtual classes to reach success in pedagogical systems. Given different requirements and also emergence of different types, several patterns can be designed to acquire learning model with high quality faced with any condition having facilities and tools, learners' requirements, features of course and so forth. A survey on the pedagogical model accounted as a modern approach in most authentic pedagogical domains all around the world, it is sought to increase quality of learning together with the least cost, forecasted that success can be acquired in the quality of learning (Arabgari, 2004).

Literature review

Jahrom University of medical sciences in 2010 proposed a course of blended pedagogical program and study of psychological effects on students where different types of pedagogical methods and approaches blended aiming at enhancing students' learning experiences. This study aimed to investigate the impact of blended pedagogy on dimensions of students' personality. The results from this study indicate that, with retrospect to the positive effects of this pedagogical method on dimensions of students' personality, use of these methods particularly use of e-learning in training medical Sciences is recommended. Ibrahim Salehi

Omran (2011) conducted a study entitled “blended learning- a modern approach to develop training and learning process”. The results from this study showed that blended learning, having the advantages of both pedagogical approaches, e.g. traditional and electronic, can be an effective approach to increase learning effectiveness, facilitate access to pedagogical tools and increase cost effectiveness. Further, due to being provided with different opportunities for learning, it is required to pay attention to learners’ personal differences besides increasing pedagogy attraction.

Seid Mahmood Hosseini(2011) conducted a study on the mechanisms of blended learning in agriculture faculties, found out blended learning creates a proper environment for learners and instructors for more effective learning and pedagogy so that the learners can select the best activities relevant with environment, style and level of learning at any time and place whereby they could be more dependent in learning and more innovative in their decisions.

The results from Factor Analysis showed that in viewpoint of academic board members, four factors including infrastructures, notification, support and incentives consist of 71% of the mechanisms of blended learning system, where in viewpoint of undergraduate students, four factors including executive, support, education and politics consist of 81% of the mechanisms of blended learning system. Attaran(2006) investigated the fourth, fifth and sixth grade students who used the electronic services in a two-year course, found out that the performance of the students in mathematics, reading and linguistic skills compared to students who used the traditional pedagogy was poorer.

Ross and Gage (2010) have shown that four different levels can be available for integrated pedagogy including activity Level, educational level, and level of planning and organizational level. These levels define the integrations in nature by means learners or designers and instructors. Integration in organizational and planning levels has received a huge attention by learners, while designers or instructors prioritize over defining integrated pedagogy at activity and pedagogical levels.

MacDonald (2006) stated that independent approach of education system in 2006 with the advent of new technologies, such as multimedia and hypermedia has undergone a fundamental change. Technology in continuous has brought about changes in pedagogy and learning where the education systems have referred to integrated approach from the Systematic approach to distance education and personal education system. Today, modern Information and communications technology (ICT) has provided the possibility to exchange information and communicate from the distance learning and pedagogy. Hence, in recent years, personal education system has been provided with a high capacity to utilize the distance learning and pedagogy.

In 2008, Zyban conducted a comparative research at the University of Central Florida on Students' tendency to integrated courses, indicated that 51% of the students definitely desire to pass other integrated courses. In a study by Bank (2005) on the integrated pedagogy at university, concluded that some students inclined to integrate learning, this kept increasing. Burge (2001) in an overview of impact of attitude on accepting the new technology-based courses including blended learning courses, found out there needs to insight and motivation to apply blended learning system. Van Nord and colleagues (2007) in their study have defined the pedagogical courses to preparing faculty members, students and participants, active support and encouraging managers and supporters as leading factors in blended learning environments. Graham et al. (2007) in their study found organizing pedagogical courses and workshops essential so as to develop blended learning. Fein. A. D, & Logan (2003) stated that academic board members can engage in blended learning system only while being acquired with essential skill and knowledge, provided with what needed. Sang et al.(2004) found that students’ familiarity to modern pedagogical technologies effective in students’ success in blended course. Kidney (2004) in an interview with academic board members stated

that professional development and pedagogy is the essential mechanisms to engage in blended learning system because professional development is a process which notifies the improvement in instructors' skills so as to instruct the learners with specific ability. Vos (2003) highlighted that the development planning for academic board members is the central point for success in blended learning where without sufficient preparation, most academic board members turn back to traditional classes whereby this can lead to lack of success in blended learning course. Hence, academic board members have to be empowered to design course and pedagogy in new environment, because the universities need to sufficient resources and motivated instructors in order to implement blended learning. The results from this study can be used by organizations, banks particularly Education system in Mazandaran province and private Institutions, students and researchers. Given that this paper aims to get to know about the effectiveness of blended pedagogy against challenges existing in e-learning, there hypotheses as following were proposed:

- 1-Blended education against resignation of addressees in e-learning is effective.
- 2-Blended education against lack of face to face encounters in e-learning is effective.
- 3-Blended education against lack of learners' presence in teamwork in simultaneous in e-learning is effective.

Research methodology

This study in terms of objective and data collection method is applied and descriptive survey method, respectively. The statistical population consists of the entire students in Houshmand secondary schools- Sari, district 2, Mazandaran province. The sampling method includes simple random sampling from the lottery type where Krejcie and Morgan method has been used to determine the sample size. In this study, the statistical population consists of 1700 individuals and sampling consists of 313 individuals regarding Morgan table. In this study, the library and field methods were used as data collection method, in a manner that first the theoretical basis was gathered from library and internet sources, and then the questionnaire based on Likret category scale was used to collect necessary data. This is in a way that this scale has been developed from five equal parts, where several items provided for the respondent totally relevant with the topic of research to specify his/her inclination about the blended pedagogy. To observe the validity of measurement tools content, a huge effort has been made in preparing the questions of questionnaire indices where on professors' views and attitudes as well as texts and literatures existing in this context have been used. Some questionnaires were provided for students who were studying in Houshmand schools and then after filled were gathered. The reliability of questionnaire was measured through Cronbach test. To determine validity, firstly 30 individuals of the samples were selected as the sample group and the questionnaires were distributed among them, so that the questionnaires were gathered after one week, and consequently the reliability of questionnaire using Cronbach's alpha formula was calculated. Hence, the value of Cronbach's alpha was obtained 0.87, and since the coefficient over 70% is a proper coefficient in determining the reliability of research tools, thus this means that research tools have high reliability to measure the sample group's views and extrapolated it to statistical population.

Research Findings

The first research hypothesis: the blended pedagogy can be effective against the withdrawal of addressees in e-learning.

Table 1. Measure the indicators of blended pedagogy impact against withdrawal of addressees in e-learning

	No	Mean	Standard deviation	Standard deviation of error
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The first research hypothesis	279	3.6323	0.65236	0.03906
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The table shown above indicates the descriptive indicators of variable “blended pedagogy impact against withdrawal of addressees in e-learning”. Mean of variable “blended pedagogy impact against withdrawal of addressees in e-learning” equals 3.6323. given this table, it can say that mean of this variable as respondents thought is greater than theoretical mean, 3. Yet, to investigate the significance of this impact, statistical tests are preferred to be used.

Table 2. The significance test of blended pedagogy impact against withdrawal of addressees in e-learning

	Test Value = 3					
	T	Df	Sig.	Mean Difference	95% Confidence Interval of the Difference	
					Lower	Upper
The first research hypothesis	16/189	278	0/000	0/6323	0/5554	0/7091

Given that the value of sig is less than 0.05, the zero hypotheses is rejected at 95% confidence level and the opposite hypothesis is confirmed. Hence, with regard to confidence level at 95%, it can say that the blended pedagogy can be effective against the withdrawal of addressees in e-learning.

The second research hypothesis: the blended pedagogy can be effective against lack of face-to-face communication in e-learning.

Table 3. Measure the indicators of blended pedagogy impact against lack of face-to-face communication in e-learning

	No	Mean	Standard deviation	Standard deviation of error
The second research hypothesis	279	3.3642	0.63135	0.03780

The table shown above indicates the descriptive indicators of variable “blended pedagogy impact against lack of face-to-face communication in e-learning”. Mean of variable “blended pedagogy impact against lack of face-to-face communication in e-learning” equals 3.3642. Given this table, it can say that mean of this variable as respondents thought is greater than theoretical mean, 3. Yet, to investigate the significance of this impact, statistical tests are preferred to be used.

Table 4. The significance test of blended pedagogy impact against lack of face-to-face communication in e-learning

	Test Value = 3					
	t	Df	Sig.	Mean Difference	95% Confidence Interval of the Difference	
					Lower	Upper
The first research hypothesis	9.637	278	0/000	0/3642	0/2898	0/4387

Given that the value of sig is less than 0.05, the zero hypotheses is rejected at 95% confidence level and the opposite hypothesis is confirmed. Hence, with regard to confidence level at 95%, it can say that the blended pedagogy can be effective against the lack of face-to-face communication in e-learning

The third research hypothesis: the blended pedagogy can be effective against lack of learners' presence in team works in simultaneous in e-learning.

Table 5. Measure the indicators of blended pedagogy impact against lack of learners' presence in team works in e-learning

	No	Mean	Standard deviation	Standard deviation of error
The third research hypothesis	279	3/5723	0/66858	0/04003

The table shown above indicates the descriptive indicators of variable "blended pedagogy impact against lack of learners' presence in team works in e-learning". Mean of variable "blended pedagogy impact against lack of learners' presence in team works in e-learning" equals 3.5723. Given this table, it can say that mean of this variable as respondents thought is greater than theoretical mean, 3. Yet, to investigate the significance of this impact, statistical tests are preferred to be used.

Table 6. The significance test of blended pedagogy impact against lack of learners' presence in team works in e-learning

	Test Value = 3					
	T	Df	Sig.	Mean Difference	95% Confidence Interval of the Difference	
					Lower	Upper
The third research hypothesis	14.298	278	0/000	0/5723	0/4935	0/6511

Given that the value of sig is less than 0.05, the zero hypotheses is rejected at 95% confidence level and the opposite hypothesis is confirmed. Hence, with regard to confidence level at 95%, it can say that the blended pedagogy can be effective against lack of learners' presence in team works in e-learning.

Main hypothesis: the blended pedagogy can be effective against challenges existing in e-learning.

Table 7. Measure the indicators of blended pedagogy impact against challenges existing in e-learning

	No	Mean	Standard deviation	Standard deviation of error
The Main hypothesis	279	3/5177	0/54078	0/03238

The table shown above indicates the descriptive indicators of variable "blended pedagogy impact against challenges existing in e-learning". Mean of variable "blended pedagogy impact against challenges existing in e-learning" equals 3/5177. Given this table, it can say that mean of this variable as respondents thought is greater than theoretical mean, 3. Yet, to investigate the significance of this impact, statistical tests are preferred to be used.

Table 6. The significance test of blended pedagogy impact against challenges existing in e-learning

	Test Value = 3				
	t	Df	Sig.	Mean Difference	95% Confidence Interval of the Difference

					Lower	Upper
The third research hypothesis	15.991	278	0/000	0/5177	0/4540	0/5814

Given that the value of sig is less than 0.05, the zero hypotheses is rejected at 95% confidence level and the opposite hypothesis is confirmed. Hence, with regard to confidence level at 95%, it can say that the blended pedagogy can be effective against challenges existing in e-learning

Conclusion

The results from statistical data based on gender among 279 individuals in statistical population reported 67.0% females and 33.0% males. Further, 32.3% and 67.7% are in second and third grade in terms of education status. Further, grade point average for 69.2% of the statistical population reported greater than 19. Further, males compared with females believed in impact of blended pedagogy against e-learning challenges, mentioned that students with high Grade Point Average believe in impact of blended pedagogy against e-learning challenges.

Mitra Zolfaghari (2007) about applying the blended e-learning system in School of Nursing and Midwifery-Tehran University of Medical Sciences, in order to establish blended pedagogy system in faculty, asked all the academic board members' and students' views and measured their views to provide the admission arrangements, and motivate professors and students to use the blended e-learning methods. Hence, 22 courses (45 courses) using blended e-learning method were prepared and implemented in university e-learning system, and over 300 students experienced this pedagogical method for the first time. Jahrom University of medical sciences (2010) proposed a course of blended pedagogy and investigation into its psychological effects on students. The results showed that there exists a significant relationship between pedagogy and components of extraversion, openness and conscientiousness as well as agreement.

With respect to positive effects of this pedagogical method, this method was recommended. Zyban(2008) indicated that 51% of students prefer to pass other integrated courses. In a research by Bonk (2005) on integrated pedagogy in university, concluded that some the number of students inclined towards integrated learning keeps increasing as time goes on. It was assumed that blended pedagogy against withdrawal of addressees in e-learning is effective.

Sang et al.(2008) considered effectiveness of both methods of e-learning and face-to-face classes, claimed that blended learning system can be a proper option for agricultural higher education system, needed to be expanded as much as possible in agriculture universities and faculties which have practicable and naturalistic nature. Tucker (2005) found that e-learning cannot generally be an alternative for the old model of classroom training and teaching in the university. Hence, blended learning approach in which two e-learning and face-to-face methods are used, have been proposed as a suitable strategy to enhance the quality of pedagogy and learning in agriculture sector. It was assumed that blended pedagogy against lack of face-to-face encounters can be effective in e-learning.

Ibrahim Salehi Omran(2011) concluded that blended learning, having the advantages of both pedagogical approaches, e.g. traditional and electronic, can be an effective approach to increase learning effectiveness, facilitate access to pedagogical tools and increase cost effectiveness. Further, due to being provided with different opportunities for learning, it is required to pay attention to learners' personal differences besides increasing pedagogy

attraction, because all the individuals do not learn using a method where use of different methods seem essential for pedagogy.

Seid Mahmood Hosseini (2011) found out blended learning creates a proper environment for learners and instructors for more effective learning and pedagogy so that the learners can select the best activities relevant with environment, style and level of learning at any time and place whereby they could be more dependent in learning and more innovative in their decisions. Graham et al.(2007) in their study found organizing pedagogical courses and workshops essential so as to develop blended learning. It was assumed that blended pedagogy against learners' presence in work team in simultaneous is effective in e-learning. Toofaninejad(2009) conducted by ZareiZavarki, aiming at investigating effect of blended pedagogy on Learning of elementary school students in third grade in the mathematic course, compared it with face-to-face method, concluded that learning of students in experimental group after attended in blended education course compared to control group has increased significantly.

Attaran(2006) found out that the performance of the fourth, fifth and sixth grade students who used the electronic services in a two-year course in mathematics, reading and linguistic skills compared to students who used the traditional pedagogy was poorer.

MacDonald (20) stated that the education systems have referred to integrated approach from the Systematic approach to distance education and personal education system. Dr Ismaeil Zarei Zavarki(2011) investigated that dimensions, principles and advantages of integrated learning is a modern approach in pedagogical system. It was assumed in this study that blended learning is effective against e-learning challenges.

The findings from the analysis in first hypothesis indicated that withdrawal of addressees in e-learning exists so that it is recommended to instructors to use blended learning to engage the learners in learning process, getting the ultimate outcome from learning.

The findings from the analysis in second hypothesis indicated that the learners would not be in a face-to-face communication in e-learning and the learning would have less effectiveness. Hence, it is recommended to use blended learning in pedagogy process so as to use the e-facilities against face-to-face encounters to have more effectiveness resulting from pedagogy. The findings from the analysis in third hypothesis indicated that learners do not attend in team works in simultaneous in e-learning, thus, it is recommended to learners to participate in team words, using the blended learning to have effective learning. The results of analysis from the main hypothesis indicate that blended learning is effective against the challenges existing in e-learning. Hence, it is recommended to organize pedagogical challenges to instructors and teach teaching method to instructors. Furthermore, use of electronic tools has to be culturalized among students, parents and instructors. Eventually, the results indicate that blended pedagogy can be effective against the challenges existing in e-learning, thus, it is recommended to take into consideration the personal differences. The results indicate that blended pedagogy can be effective against the challenges existing in e-learning, thus, it is recommended to take into consideration use of technology regarding difference fields and courses.

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