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Sub-models of Blended Learning in Distance Education Applications

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Abstract

With the development of technology and its reflections on education, the use of technology as a tool in the teaching process of the courses is becoming more widespread. As a result of this widespread use, it becomes a necessity to move learning-teaching activities beyond the boundaries of the classroom or school. Distance education applications, which emerge with the effect of individuals' needs for learning independently from place and time, are becoming widespread especially in the electronic environment with the rapid developments in technology and the increase in Internet access opportunities. All these circumstances have made some teaching and learning models inevitable during the recent Pandemic. In the study, we aimed to present what is the best sub-model of Blended Learning for the students to access best learning. When the sub-models of Blended Learning are examined, it appears that each model has its own advantages, and it is necessary to use the most appropriate model according to the learning skills of the students. We have determined that A La Carte Learning Model, one of the sub-model of Blended Learning, is the most appropriate model for the students who have difficulty in fixed programs and fixed courses, as it gives them a great opportunity of choosing the best courses according to their interests. We have the conclusion that the sub-models of Blended Learning should be applied in the process of Distance Education in order that the learners could be successful and get academic achievement during the recent Pandemic.

Keywords: Distance Education, Blended Learning, A la carte Learning, Flipped Classroom, Educational Management

1. INTRODUCTION

Although individuals can receive education with web-based education without limitation of time and space, it is seen that they cannot benefit from some opportunities of face-to-face education. These needs combined the most important features of classroom learning and e-learning, resulting in the emergence of an approach called blended learning (Yaman and Graf, 2010; Hebebci and Usta, 2015). According to Horton (2000), blended learning is the combination of web-assisted learning with several powerful and advantageous aspects of classroom learning. Blended learning also appears to have many advantages compared to traditional learning. Hofmann (2006) stated that the blended learning approach is more flexible and has low cost compared to traditional classroom approaches, and it is possible to make presentations to small groups or even one-on-one instruction. In addition, he stated that it can be used repeatedly without requiring an extra cost and that the course can be compensated when necessary.

Considering the technological developments, it is clear that blended learning will be a learning approach that will be more preferred by educational institutions in the future (Fook, Kong, Lan, Atan and Idrus, 2005). From this point of view, researches on designing blended learning environments are becoming more important. However, there are different approaches to define blended learning in subjects such as learning environments used in blended learning

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environments, learning methods, the way of applying these methods and their effectiveness, and how and which elements should be blended in these environments. For this reason, there is no single model or an application recipe presented in the design of blended learning environments. For the effective implementation of blended learning, institutions, administrators, teachers and students need to understand blended learning correctly (Biluic, Goodyear and Ellis, 2007).

2. BLENDED LEARNING

Combining different teaching methods to ensure effective learning has been around for many years. For this purpose, teachers mix and use different teaching strategies in classrooms. The technology interpretation of "mixing" is blended learning, which gained significant momentum in 2001. Although blended learning is not a new concept, its potential has emerged with e-learning (Sloman, 2003; Dağ, 2011). Blended learning, which has been presented as an effective instructional design approach in recent years, is the use of different knowledge transfer methods together and in some cases within the scope of a learning method. Blended learning is the combination of two separate learning/teaching models, traditional face-to-face learning system and distributed learning system, with emphasis on computer-based technologies.

Blended learning is primarily expressed as the mixing of web-based technologies (virtual classrooms, self-teaching education, collaborative learning, video, audio and text streaming) to achieve an instructional goal. Secondly, using a different conceptual approach, combining various educational approaches such as behaviorism, cognition, constructivism to produce the most appropriate learning outcomes with or without using instructional technologies is expressed as blended learning. Thirdly, using face-to-face education under the guidance of a teacher and combining different formats of instructional technologies (video, CD-Rom, web-based learning, distance learning technologies, etc.) is blended learning. Fourth and lastly, blended learning is defined as combining and blending real work tasks and learning technologies to create a harmonious effect for learning.

. Blended learning does not have a limited scope, such as the use of some strategies such as discussion forums, mail, content presentation, which are used only in e-learning, in face-to-face teaching and mostly as a tool to support face-to-face teaching (Usta, 2007; Ünsal, 2010). Blended learning, which should be accepted as an instructional design approach, is a process that should be strategically planned in order to be implemented in the realization of teaching for a course, in the dimension of a curriculum or an educational institution.

Blended learning focuses on achieving the highest achievement by matching the right learning technologies and applying the learning objectives, with the right personal learning style to equip the right skills to the right person at the right time. The principles hidden in this definition include some important points such as
The focus is on learning goals rather than sharing method.
Many personal learning styles need support to reach large audiences.
Each individual participates in the learning event with different information.
In many cases, the most effective learning strategy is just what is needed at that moment.

There are main elements associated with blended learning such as psychological, technological, theoretical, communication and management system. Blended learning interacts with computer assisted learning, web based learning, electronic learning, learning management system and learning platform. In addition, there are other areas in which all these elements that blended learning is related to are also related to each other. For example, computer-assisted learning is directly related to behaviorism, computer-assisted applications, lifelong learning, and Web-assisted learning, and developments here change by affecting computer-assisted learning. Web-supported or face-to-face learning approaches can be used in the school environment, inside and outside the classroom. One of them can be done or there may be a few of them. What is important here is the planning to be decided with the participation of other experts in the company of the instructor. In addition, it is the rational evaluation of the school's opportunities and strengths. The blended learning approach to be applied will have many benefits for both the student and the teaching staff, as well as the educational institution and its effectiveness. We can briefly explain some of the benefits of the blended learning approach as:
1. It increases learning effectiveness.
2. It makes the richness of learning permanent.
3. It is convenient in terms of time and cost.
4. Results take place at the most appropriate level.
5. Collated studies occur immediately.

In addition to these, the application of the blended learning approach includes learning wealth, access to information, social interaction, management of learning and so on. It leads to important results (Osguthorpe and Graham, 2003).

It is understood from these explanations that, in general, this learning approach provides diversity, cooperation and communication density in terms of individual learning, individual speed, listening, reading, seeing and application. In addition, it can be said that feedback has a positive effect such as speed, freedom in the learning environment, saving in time and learning costs.

3. SUB-MODELS OF BLENDED LEARNING

3.1. Station Model

This model is a rotation model application in which students are included in one of the small learning centers, called a station in the classroom, that contain different learning methods. Students move between different stations in groups. Some students can start learning on their own from the online learning station, while others can start learning under the leadership of a teacher. After a certain learning is achieved, they are moved to cooperative learning stations. They usually do a project task with other students at this stage. Then they move back to the online learning phase on computers.

The Benefits of Station Model

- Teachers can organize the flow of time in their classroom with very little adjustment. Most students are already used to walking through a number of learning centers.
- Splitting the class into groups helps with classroom management and provides a way to do differentiated teaching.
- It rovides frequent physical position changes as students move between stations
- In this model, the interest and motivation of the children are kept high with different activities.

The Difficulties of Station Model

- Teachers should learn new skills such as how to plan small groups correctly.
- Classrooms need a robust learning management system that will help bring every student to the right online content and create actionable reports for teachers.
- The online learning station should be easy for students to do on their own with minimal teacher intervention.

3.2. Lab Rotation Model

This model is a rotation model application where students do not stay fixed in the classroom and work in different learning areas within the school, such as Online learning lab.
Within a given subject, students move between different learning areas in the school according to a fixed schedule. One of these areas is a lab for online learning.
It is beneficial for primary and secondary school students to have a fixed and consistent schedule for moving between learning activities in a blended learning environment.
This structure allows students to know what to expect and serves to alleviate anxiety.

The Benefits of Lab Rotation Model

- It requires little regulation in school design and teachers' classroom activities.
- This model allows teachers and other assistants to set up flexible schedules and enables schools to use their existing computer labs.
- Time is saved by converting 25 50 of the face-to-face training activities into online activities in the lab environment.

The Difficulties of Lab Rotation Model

- The computer lab needs to be available and requires planning for its use.

- Learning labs need a robust learning management system that will guide every student to the right online content and help create actionable reports for teachers.
- Online learning should be easy for students to do on their own with minimal teacher intervention.

3.3. Personalized Model

This model is a rotation model application that is adapted individually for the student in a course or subject and in which different learning methods are applied cyclically, at least one of which is online learning, within a certain plan. Students are allowed to rotate between stations, but only on individual schedules determined by a teacher or software. Unlike other rotation models, students do not have to stop by every station, but only attend activities planned in the program lists.

The Benefits of Personalized Model
- It allows each student to work with a special program at their own pace.
- Students can use the method that is most suitable for them in the learning process.
- Fixed timing may work better for students who need predictable routines and scheduled face-to-face checks than the Flexible, Self-mixed or Enriched Virtual models offer.

The Difficulties of Personalized Model
- It requires the transformation of teaching, school, and content delivery.
- Fixed programs can be a disadvantage for students who can learn faster with a more flexible schedule.

3.4. Flipped Classroom Model

This model is the most known and popular model. In this model, the main learning takes place online. That is, it is learned at home / dormitory, applied and reinforced at school. The teacher provides guidance to make up for the learners' deficiencies in face to face activities. With this model, it is aimed to bring the theoretical knowledge of the participants to the same level before the face-to-face training, and to use the classroom training time for implementation, discussion and project. It is a method that aims students to learn theoretical knowledge through individual study using different tools. Supporting tools such as interactive video, online simulation, book, and article are used in individual studies. Digital learning materials are interactive and include plenty of formative feedback and assessment in a way that the learner can progress at their own pace. Students work by watching content individually and can review, fast forward or skip some content based on their assessment scores, feedback, and their own assessment of their progress. This model reverses the traditional relationship between lesson time and homework.

The Benefits of Flipped Classroom Model
- It is student-centered and provides active learning.
- Students have the opportunity to learn with the tools suitable for them and at the appropriate pace before the training.
- Teachers can enrich the classroom time with different methods and techniques instead of lecturing.
- It increases peer interaction in the classroom.
- It develops the responsibility for learning.
- It provides the most efficient use of both online and face-to-face environment.
- Students can watch the contents over and over and ask the teacher if they don't understand.
- There is no homework stress, and they can get help istantly. as homework, activities and projects will be done at school.

The Difficulties of Flipped Classroom Model
- Students must have devices such as computers and tablets and a reliable internet infrastructure at home.
- Teacher competencies need to be improved.
- Since the whole training process needs to be redesigned and new contents created in the implementation of this model, the trainers should rule over the process.
- Learning content and materials should be shared with the students, ready before the course.

- Students with low learning motivation and lack of self-study habits can pose problems.
- Students may come unprepared for the course. In order to eliminate this risk, only the participants who have completed the preliminary studies can be invited to in-class training.

3.5. Flexible Model

In this model, teaching is primarily online, but still in a school setting. Students work at their own pace and individually. Teachers are in the role of supervising, guiding and helping learning process. Teachers provide flexible face-to-face support with practices such as small group training, group projects, and individual courses Teachers can take immediate action since they are in the learning environment.

The Benefits of Flexible Model
- Students navigate through various stations whenever they need it
- and they are not constrained by time limits.
- It can increase student motivation and autonomy.
- It is mostly implemented at the whole school level, but can be accomplished at the classroom level with careful planning.

The Difficulties of Flexible Model
- This model requires advanced curriculum planning for the development, improvement, and creation of online course materials that allow students to progress independently on the material.

4. RESULT AND SUGGESTIONS

In blended modeling, organizing educational materials in accordance with the online process, bringing methodical and practical learning together and targeting the need-oriented outcome are among the most basic objectives. Individuals' learning skills, levels and past stories differ. In this blending that supports the need-based acquisition of knowledge by using multiple methods, it should be based on determining the educational infrastructure to be created for the needs of students. It is also known that blended learning provides permanent gains, with the principle of sustainability that will allow the effectiveness of the method, and educational achievements that require process management such as research-development, monitoring, analysis-synthesis, also allow measurement and evaluation in multimedia.

Since the teaching-learning process requires a dynamic process management, the role of the teacher is great. In the Blended Learning approach, with the inclusion of technology in education, teacher-student interaction has become even more important. Considering the variability of learning styles, practices based on individual learning. With this approach, which develops the traditional understanding of teaching, the perception that learning does not only take place in the classroom but that technology is an educational need becomes widespread. Through this approach, which is structured on learning rather than teaching, it has been the main goal to train autonomous students and improve their learning capacity. For this purpose, the fact that knowledge is partially removed from being a phenomenon presented by the teacher means that the existence of researcher-student also appears. Supporting and observing the student in the process should be the basic principle of the teacher. It is the responsibility of the teacher to introduce methods that lead to research and aim to develop skills in the transfer of knowledge. The teacher aiming at the lifelong learning skill of the students should be able to support the student's independent determination of the learning according to the needs in the content and subjects of the acquisition. The parallelism of the processes of parsing, verifying, applying and personalizing knowledge with the term independent learner is too important to be left to chance. Freedom and awareness in learning are skills that can be acquired through multiple experiences. Therefore, teacher observation and guidance is essential at the point of producing and reproducing knowledge. One of the unchangeable rules of education is to prepare individuals for the responsibility of shaping society healthily. In this context, the teacher should raise individuals who are equipped with the principle of independent learner education, self-sufficient, productive and aware of their social responsibility.

The Blended Learning model also supports the collaboration of students, especially in project-based studies. Online interaction requires verbal participation. It has been observed that this model plays an important role in the formation of awareness that supports active learning such as brainstorming, multiple thinking, critical thinking and

decision-making mechanisms in distance education process during Covid-19 pandemic. It is possible for students to monitor factors such as determination, assertiveness, willingness and skill, and to make an academic development assessment. Undoubtedly, all these observations make it necessary that preliminary and acquisition-oriented infrastructure works should be designed in advance according to the needs. It is again the teacher's responsibility to create the curiosity or need for learning in an online environment. The diversity of the skills students will offer in line with their abilities also ensures the continuity of learning skills. Under all circumstances, leading the education without interruption, supporting technology use skills, emphasizing the importance of task-responsibility relationship, maintaining assertiveness, regular reporting of student status and feedback should be taken as a basis by the teacher.

In this way, while it is possible for the student to take responsibility for his / her learning, to evaluate goal planning and self-achievements, it is also possible to fix the concept of autonomy. In the lifelong learning process, the teacher is no longer the only source of knowledge. This is an important strategy of the Blended Learning approach. The educational purpose of the materials used in modeling should be conveyed to the students in advance and to raise awareness about its necessity, to consensus with the students to change or enrich the content according to their learning levels when necessary, and especially to design activities that can maximize their creativity together will increase the educational quality. The perception that the classroom environment is not the only place for learning should be instilled in the students, and the fact that this perception can be applied under all conditions that threaten public health should be encouraged.

Within the personality, ability and capacity of the student, his efforts to become an independent learner must be supported at all times, taking into account his cognitive strategies in order to increase his motivation. One of the most important factors affecting autonomous learning is to pay attention to the fact that the materials can be developed according to the learning and skill level. In the educational environment created, the mood dynamics of the students should be constantly observed. The requirements should be reviewed and students should be allowed to evaluate themselves.

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