A Review Based Study for Evaluation of Various Blended Learning Techniques in the Educational Domain

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Abstract- In today's scenario blended learning is becoming more common in a very wide range of learning environment. Blended learning is a combination of traditional (face –to-face) learning and online digital media learning. Blended learning is also termed as hybrid learning or mixing mode instruction. Blended learning is helpful in the presence for both teachers as well to students. Blended learning uses and online technology is not just a supplement, but a transform to improve the learning process. In a blended-learning course, students might attend a class taught by a teacher in a traditional classroom and also as an independent online classroom. This type of learning approach ensures the learner in engaging and driving his or her individual learning experience. The benefit of blended learning is time saving, cost reduction and flexible. This paper presents the review of various types of blended learning model and types of evaluation such as formative and summative evaluation.

Keywords: blended learning(BL), formative evaluation, summative evaluation, traditional learning, online learning.

I. INTRODUCTION

Blended learning is a technique where the traditional and the online learning are combined together to make progress in learning methodology in other words it improve the learning capacity of the students in an educational domain. Blended learning is also referred as integrative learning was the various types of blended learning models are supported. Besides developing student's skill it also improves the efficiency of the instructor. Blended learning (BL) requires the physical presence of both teacher and student, with some elements of student control over time, place, path, or pace [1]. Blended learning technique vanish the time and location limitations and the beneficial strategy is money saving. In blended learning various participants engage themselves due to its flexibility. The basic techniques are changed to a larger extent by simply adding computers to the classroom.

In the beginning the first distance course was launched by Sir Isaac pitman in 19th century. Now it has evolved as blended learning in this century. In the first year, students attended face-to-face sessions four days a week, with one of these four days taking place in a computer enhanced classroom and online [2.] The term "virtual instruction" and" virtual reinforcement" in which students are in the large room and worked with their laptops for their individual work. Students are interested in doing homework in the class and they are expected to watch lectures online videos at home. The on-going infusion of web-based technologies into

the learning and teaching process has highlighted the potential of blended learning[3][4]. The progress of the student can be tracked by them through blended learning. It is a choice of pupil between reading a text and working individually.

It creates enhanced communication between the instructor and the pupil this leads to improve the performance of the student. Blended learning is also highly context-dependent and therefore a universal conception of it is hard to come by [5].Instructors help the students by clarifying the course expectations for the online components and ensure that the online activities are graded. It requires less classroom space as most of the time is spent online. Students in online courses have more social interactions with their peers than they do in traditional learning.
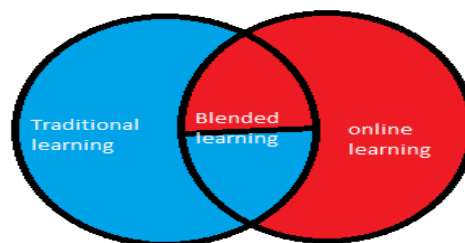

Figure 1: Blended learning

II. MODELS OF BLENDED LEARNING

FACE-TO-FACE MODEL DRIVER:
In this model students are functioning at various levels of curriculum and mastery. In general, some students will participate in online learning components. The teacher drives the instruction and augments with digital tools [6]. This model prevents highly capable students from boring. They also produce course materials that will help the students while they are revising at home.

ROTATION:
This type of model is closely related to the concept of flipped classroom model. Students are involved in both online interaction and face-to-face interaction. Students cycle through a schedule of independent online study and face-to-face classroom time [7][8]. It induces students to gain more knowledge regarding the concept. Students gain knowledge by watching lecture videos outside the class that enable them to solve problems at their classroom.

FLEX:
Most of the instructions are delivered through online digital media, with teachers providing as needed support and flexible in small group of setting as in traditional learning. Most of the curriculum is delivered via a digital platform and teachers are available for face-to-face consultation and support [9]. Flex is mostly used and at secondary level of grade.

ONLINE LAB:
Online lab is a type of blended learning. The entire course and teaching are done online. Students interact with teacher through pre-recorded videos, audio and video conferences or discussion forums and email. The entire curriculum is delivered via a digital platform but in a consistent physical location and students usually take traditional classes in this model as well [10].

SELF -BLEND:
This type of model is fully based on individual approach. Student will attend face to face classes, but most of the learning is done by online. Students choose to augment their traditional learning with online course work [11]. By enrolling in online courses students can supplement their regular programs of study.

ONLINE DRIVER:
Instructions are delivered through online platform, with periodic face-to-face meetings. This model is the complete vice-versa of a traditional face-to-face instruction. Students finished the entire course through an online with possible teacher check-ins. Entire curriculum and teaching is delivered via a digital platform and face-to-face meetings are scheduled or made available if necessary [12]. Student whose other obligations demand flexibility to move school can use this online learning approach.

III. TYPES OF EVALUTION IN BLENDED LEARNING

- Formative assessment
- Summative assessment
- Diagnostic assessment
- Norm-referenced assessment
- Criterion-referenced assessment
- Interim assessment

FORMATIVE ASSESSMENT:
This method of evaluation can also be either formal or informal. It is the method used for rectifying the difficulties of students by monitoring students in a regular basis. It is the most powerful type of assessment to make progress in student skill and ability. The formative assessments aim to see if the students understand the instruction before doing a summative assessment [13]. The primary goal of this type of assessment is to improve learning through material. Formative assessment can be variety of forms (such as practice weekly quizzes, clicker question, one-minute papers, writing assessments ,clearest/muddiest point exercises, low stakes group work in the class, etc.).

Advantages of formative assessment:
- The main objective of formative assessment is helps in development of skills and ability of the learner.
- Weakness is rectified at initial stage and shows gradual progress.
- Formative assessment assists improving the performance of individual to achieve goal.
- The future projects can be implemented with the clear plans and ideas in formative assessment. It provides opportunity for reconsidering programming plan and ideas.
- At each step students are guided by the instructor so that it is easier to find if anything goes wrong.

Disadvantages of formative assessment:
- It consumes more time in gathering the information or data for effective implementation.
- Some of the remedies cannot be implemented at all the times this cause individuals avoid this type of practice.
- Frequent revision and test makes the process monotonous and leads to inefficiency in their working.
- Sometimes teachers may be lacking in training and professional development.
- If students did not perform in assessment well teacher may leads to misjudge the Student.

SUMMATIVE ASSESSMENT:

This type of assessment provides information about the achievement of the student. It also represents the periodic report. It creates least impact on improving student performance. The performance of student is differentiated with either a standard or a group of students. Assessment for learning is generally formative in nature and is used by teachers to consider approaches to teaching and next steps for individual learners and the class [14]. The primary goal of this type of assessment is to make decision through final result. Summative assessment may take a variety of forms (such as instructor-created exams, standardized-test, final projects, final presentations, final reports and grades).

Advantages of summative assessment:

- The summative assessment is the only way to know how for the student have understood the concept.
- This assessment is used to estimate the effectiveness of educational program.
- The result of summative assessment is considered as academic record.
- Positive result of summative assessment acts as boosting factor of individuals.
- The evaluation technique in the summative assessment is used for the course of instructional design.

Disadvantages of summative assessment:

- The main disadvantage of summative assessment is that it gives importance to the final result.
- Reliability and validity errors are focused in the summative assessment.
- The other disadvantage of summative assessment is that the questions are quite different to formative assessment.
- The negative results of summative assessment act as a setback for individual growth and development.
- The summative assessment is not always perfect, because even brilliant students may get low results. Student gets nervous and tensed due to exam pressure.

DIAGNOSTIC ASSESSMENT:

This type of assessment is used to determine individual strength, weakness and idea about the next step. Self-assessment is a form of diagnostic assessment which involves students assessing themselves. Forward-looking assessment asks those being assessed to consider themselves in hypothetical future situations [15]. It can be either formal (IQ test /aptitude test, fitness test) or informal (discussions, observations, questioning).

NORM-REFERENCED ASSESSMENT:

This assessment is contrast to criterion referenced assessment. This means that standards may vary from year to year, depending on the quality of the cohort, criterion-referenced assessment does not vary from year to year (unless the criteria change) [16]. It shows the imbalance of the performance between the students of different norms.

CRITERION REFERENCED ASSESSMENT:

Criterion-referenced assessment is used to examine a specific knowledge or skill. It is a test to estimate the curriculum based on a course.

INTERIM ASSESSMENT:

Interim assessment takes larger period of time. The result is not reported simultaneously but, faster. This assessment is more formal using hand-written tools such as projects, tests and assignments.

IV. PURPOSE OF EVALUATION

Evaluation is the link between the teaching and learning. It is the critical step in learning process and includes student involvement. It is important because evaluation is the only method to anticipate student will exactly take from their class experience. An informal assessment usually occurs in a more casual manner and may include observation, inventories, checklists, rating scales, rubrics, performance and portfolio assessments, participation, peer and self-evaluation, and discussion [17]. The only one component of assessment process is testing. This involves in identifying the student strength and weakness, good or bad, right or wrong in some cases. It provides an evidence for the completion of the course. The information gained from the assessment is used by the teacher and the student to formulate their next level of teaching and learning.

V. CONCLUSION

As the paper clearly explains the various types of blended models and different assessment methods supported in blended learning which benefits both student and instructor community in analyzing student performance. It also clearly explains the fact that through blended learning both students and teachers have full freedom to decide their mode of knowledge transformation in educational domain. In support to various assessments type, time factor falling an important aspect in explaining the strategy for improving student learning skill to acquire deep knowledge.

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