



## **Effect of using Blended Learning Method on Final Year Students of BAMS to Learn Shalyatantra**

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### **Authors' contributions**

*This work was carried out in collaboration among all authors. All authors read and approved the final manuscript.*

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### **ABSTRACT**

**Background:** E – learning has been considered as one the most up-to-date learning techniques, which come with a slew of benefits like it allows worker to be trained, educated etc and negative aspect like dependence on technology, a lack of motivation, and a lack of human touch. Blended learning, on the other hand, is a mix of online and face-to-face learning. The aim of this study is to compare the efficacy of blended learning to traditional learning.

**Aim and Objectives:** To study the effect of Blended learning method on Final year BAMS students in comparison with conventional teaching method to learn Shalyatantra.

**Methodology:** The Final year BAMS students of MGAC.H & RC will be selected for the study and equally divided in two equal groups i.e A and B. 'Kshar Karma' will be taken as study topic. In Group A, topic will be taught by Conventional method while in Group B it will be taught by Blended learning method. Senior and experienced Shalyatantra faculty will be chosen. Sensitization of teacher and final year BAMS student regarding Blended learning method will be done. Total 70 students will be equally divided into two groups. Pretest (before commencing study) and posttest (after sessions) form consisting of 20 MCQ will be distributed and filled up by the participants.

**Results:** Result will be drawn on the basis of the observations.

**Conclusion:** Conclusion of the study will be drawn on the basis of statistical data calculated.

*Keywords: Blended learning; conventional teaching; E – learning; ksharkarma; shalyatantra.*

## 1. INTRODUCTION

### 1.1 Background and Rationale

E-learning is described as education delivered electronically through the internet or an intranet (multimedia like CDs or DVDs) [1]. It has been regarded as one of the most cutting-edge learning techniques which is associated with many advantages like it allows worker to be trained, educated etc. However, E- learning is also having some negative aspect like dependence on technology, a lack of motivation, and a lack of human interaction. Blended learning, on the other hand, is a combination of online and in-person instruction. Boelens, Van Laer, De Wever, and Elen define blended learning as learning that occurs in a classroom setting and is characterised by a deliberate combination of online and classroom-based measures to initiate and encourage learning [2].

Blended learning predates the development of digital technology. Its roots can be traced back to correspondence courses for distance learning.. The objective of bridging distance is still a viable reason for implementing blended learning. Personal computers are becoming more common. The creation of new learning models at various levels of education was aided by the introduction of the worldwide web in the 1980s and the 1990s. Friesen discovers the word "blended learning" being used in the private sector as early as 1999 [3]. New technology not only have a potential to bridge space, but it could also bridge time (through recording) and individualize learning (by giving students control over their journey through the material and learning pace). Because of the four factors of time, location, direction, and speed, different educators can value new technology for different reasons and have different ideas about what the term "blended learning" means.

There are six different types of blended learning, including: (1) Face-to-face model, with online learning as a complement to classroom learning; (2) Rotation model, students vary between operating online and other classroom-based modalities; (3) Flex model, in which students primarily learn online according to an individually tailored schedule and teachers provide face-to-face support as required; (4) Online lab model, in which students participate in a campus-based online course to supplement their traditional

studies; (5) Self-blend model, in which students participate in an off-campus online course to supplement their traditional studies; (6) Enriched virtual model, in which the majority of learning takes place online, with just a few trips to a physical location for face-to-face training. [4] The consequences of various models for blended learning practitioners vary depending on the expected objectives of adoption and how successfully the challenges of implementation are met. In this study effectiveness of Flex model of Blended learning will be studied.

Keeping up with educational advancements is critical for dealing with challenges that may arise as a result, such as vast amounts of knowledge and an increase in the number of students, as well as a teacher shortage. Despite its flaws, the conventional teaching method adds a much-needed human touch to the learning process. Teachers' personalities and behaviours have a significant impact on the development of students' personalities. Traditional approach has its own benefits but it is not free from shortcomings. It is unable to meet the individual needs of all students in the class, owing to an insufficient pupil-to-teacher ratio. To align their knowledge with current technical advancements and globalisation, to reduce teaching errors, to improve consistency, and to expand their knowledge exposure of students towards newer teaching technology is a good option. Blended learning is one among them. Blended learning seeks to promote immersive learning by combining or merging the roles of a teacher in a conventional classroom and those in a virtual classroom [5] The present study will be conducted in order to evaluate the effectiveness of blended learning method as compared to conventional method to learn Shalyatantra in Final year BAMS students which will attempt to raise student interest, resource availability, and overall course quality.

## 2. AIM AND OBJECTIVES

### 2.1 Aim

Study the effect of Blended learning method on Final year BAMS students in the department of Shalyatantra.

### 2.2 Objectives

1. To evaluate the effectiveness of Blended learning method on final

year students of Ayurved to learn Shalyatantra.

2. To evaluate the effectiveness of Conventional learning method on final year students of Ayurved to learn Shalyatantra.
3. To compare the Blended learning method with Conventional method.

### 2.3 Research Question

Whether using Blended learning method is less, equally or more effective than Conventional method on Final year students of BAMS to learn Shalyatantra?

### 2.4 Hypothesis

Compared to Conventional method, Blended learning method may be more effective on Final year students of BAMS to learn Shalyatantra.

### 2.5 Null Hypothesis

Blended learning method may not be effective as compared to Conventional method on Final year students of BAMS to learn Shalyatantra,

### 2.6 Trial Design

It is a non-randomized interventional study wherein the whole batch of final year student (58) will be divided into two groups consisting of equal high and low achiever as per their term examination result.

## 3. METHODOLOGY

### 3.1 Source of Data

Final year BAMS students from Mahatma Gandhi Ayurved college and Hospital & Centre, Salod (H) Wardha.

### 3.2 Eligibility Criteria

#### 3.2.1 Inclusion criteria

Final BAMS year students willing to participate.

### 3.2.2 Exclusion criteria

Final BAMS year students not willing to participate.

First second and third year BAMS students.

### 3.3 Criteria for Discontinuing or Amending the Interventions Allocated

Participant will be removed from the study if he or she remained absent for any of the session.

#### 3.3.1 Period of Study

12 months.

### 3.4 Primary Outcomes

Blended learning is the combination or blend of face to face and online learning using which we can bring the student from passive learning to active learning. It will promote the critical thinking and reasoning about the topic leading to better understanding.

### 3.5 Secondary Outcomes

Offers learner the opportunity to be both together and apart while learning. It will also provide participation in learning and helps in facilitating communication skill in students.

### 3.6 Recruitment

Total 58 students of Final year BAMS will be equally divided into two groups' i.e A and B. As per their term examination result, student will be divided into high and low achievers. Students having more than 65 % will be consider as high achievers and student below 65% will be considered as low achievers. Each group will be consisting of equal high and low achiever students.

### 3.7 Methods

Selection of student, sensitization of teacher and final year BAMS student regarding Blended learning method, grouping, pretest, conduction of sessions, posttest, cross over, feedback.

**Table 1. Grouping and teaching learning method**

Sr no.	Group	Teaching learning method	Sample size
1	A	Conventional method	29
2	B	Blended learning method	29

Total 58 students will be equally divided into two groups' i.e A and B. As per their term examination result, students will be classified as low achievers & High achievers. Each group will be consisting of equal high and low achiever students. Pretest form consisting of 20 MCQ will be distributed and collected from each student before teaching. 'Kshar Karma' will be taken as study topic. In Group A, topic will be taught by Conventional method while in Group B it will be taught by Blended learning method. The topic will be completed in three sessions (each of 2 hours) for each group. Then posttest form consisting of 20 MCQ will be distributed and filled up by the participants. Cross over of blended learning and conventional method will be conducted followed by feedback.

### 3.7.1 Data collection methods

Assessment and evaluation criteria will be based on pretest and post test score. Feedback consisting of open-ended questions and Likert scale will also be analyzed.

### 3.7.2 Data management

PI will code the data entry.

### 3.8 Statistical Methods

Statistical analysis was done by using descriptive and inferential statistics using chi-square test, students paired and unpaired t test and software used in the analysis were SPSS 27.0 version and GraphPAD Prism 7.0 version and  $p < 0.05$  is considered as level of significance.

## 4. RESULTS

If the proposed study results in a positive outcome, then it will be good substitute for other teaching learning method especially online teaching method. It will enhance the communication skill, retention strength, critical

thinking and better understanding about subject in students. It will also give insightful report about students.

### 4.1 Translatory Component

Today's demand is for a hybrid learning approach that combines the benefits of both modes viz. face to face and online modes for student learning and gaining information. If this study consequences in a constructive manner, then Blended learning will add a new dimension to the learning process, exposing students to a vast pool of knowledge and expanding their horizons and countless chances to understand, unlearn, and relearn will be there. This method of instruction will help all types of learners, including those who are in uniform or who are physically disabled. It assists in reaching out to all students.

## 4. DISCUSSION

Different learning problems require different solution. In pre digital age, combinations of different learning context were used for teaching. Blended learning is one among them where there is a blend of formal and non-formal teaching methodologies. Blended learning improves pedagogy, expands access to information, and encourages social interaction among students. By Blended learning students will be benefited from online learning and CAI i.e computer assisted learning while maintaining the social contact and human touch of conventional teaching. It will provide more scopes for interaction with the students. Students become more technologically savvy, and their digital fluency will get enhanced. Up till now no such method of learning is incorporated in Ayurved teaching to learn Ayurved therefore in order to understand the effect of blended learning to learn Shalyatantra (my subject) which is a clinical subject, this study will be conducted, and its

Item	Q1	Q2	Q3	Q4
Enrollment of Volunteer				
Data collection				
Writing thesis up to methods				
Data analysis				
Writing thesis up to results and Conclusions				
Submission				

Fig. 1. Gantt chart (Quarterly based)

effect will be compared with the effects of conventional or traditional teaching method. Few of the related studies were reviewed [6-9]. Sawarkar et al. [10] reported on Ayurveda Students Perception toward Online Learning during the COVID-19 Pandemic.

## 5. CONCLUSION

Our students are the future of our country. We need to get them ready to adapt and apply the skills they're learning to the tools they'll be working with. Conclusion of this study will be based on statistical analysis. Effectiveness of blended learning in comparison with conventional learning will be assessed from pretest, posttest scores of students and feedback on Likert scale.

**Dissemination policy:** The data will be disseminated via paper publication.

Eligibility guidelines for authorship and any intended use by professional authors.

## 6. RECOMMENDATIONS

Blended learning is a model that uses technology to improve learning while still having a good impact. It is cost efficient, and it assess the contents from anywhere, anytime on any device. This study involves the amalgamation of online and face to face learning which if found to be more effective than conventional method then this work will have significant value. It will increase the motivation of student to actively participate in the class. It will also help for better understanding of the subject and increases student engagement easily.

## ETHICAL APPROVAL

Approval from the Committee on Research Ethics has taken. REF No: DMIMS (DU)/IEC/2020-21/9066.

## CONSENT

Each participant asked to sign a written informed consent form.

## COMPETING INTERESTS

Authors have declared that no competing interests exist.

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