Construction And Validation Of Scale To Measure The Blended Learning Of Higher Secondary School Students

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ABSTRACT:

The study has been conducted to examine the level of Blended learning of higher secondary school students. The sample consists of 100 higher secondary school students from various Schools in Chennai. Samples of 100 higher secondary school students were selected for the investigation. The main objective of the present study is to develop a research tool to measure the Blended learning of higher secondary school students. The investigator has used normative survey method for the study. The researcher had attempted to construct and standardize the Blended Learning scale to measure the of Blended learning of higher secondary School students.

KEYWORDS: Blended Learning, Higher secondary school students.

INTRODUCTION

Education is one of the areas that are experiencing exceptional changes as a result of the advancement and use of information technology. Mobile and e-learning are already facilitating the teaching and learning practice with the use of latest channels and technologies. Blended learning is a potential outcome of advanced technology based learning system. The charm of blended learning approach lies in the adaptation of technology aided learning methods in addition to the obtainable established based learning. Blended learning, which is usually, viewed as a combination of face-to-face and online delivery methods. So it was a need to study Blended learning among higher secondary school students.

OBJECTIVE

To develop a research tool to measure the Blended learning of higher secondary school students.

BLENDED LEARNING

Blended learning scale has been developed and validated by the investigator. A lot of literature on Blended learning, test construction procedures was used for the construction of the tool. The Blended learning scale was constructed after having discussions with psychologists and experts in the field of education. The test has been prepared on five point rating scale based on Likert's type. Initially positive and negative statements were prepared in English version.

The scoring procedure for the tool for the option Strongly Agree is given a score of 5, Agree is given a score of 4, Neutral is given a score of 3, Disagree is given a score of 2, and Strongly

Disagree is given score 1 for positive statements. For negative statements it is reversed as strongly agree is given a score of 1, Agree is given a score of 2, Neutral is given a score of 3, Disagree is given a score of 4, and Strongly Disagree 5. The minimum score for the tool is 50 and maximum score of the tool is 250.

ITEM ANALYSIS

The draft tool prepared by the investigator was administered on a sample of 100 higher secondary school students were asked to mark their opinion among the given alternatives. Each statement has five alternative responses; namely strongly agree, agree undecided, disagree and strongly disagree. Scoring was done for all the statements. The minimum score would be 50 and the maximum

score would be 250. It is most efficient to do the checking as a single operation after all booklets have been scored.

Item analysis was adopted for the final selection of statements. The total scores were calculated separately and they were arranged in the descending order. The top 25% and the bottom 25% of scores alone were taken into account. The difference in means of the high and low groups for each item was tested for significance by computing the t-ratios. Items with t-value of 1.96 and above were selected for the final tool. Thus, the final tool contains 40 items; the list of items with the t-value is presented in Table-1. Split-half method was also used to find out the consistency of the test.

TABLE 1: BLENDED LEARNING

S.No	t-value	Selected / Not Selected
1	3.121	Selected
2	2.161	Selected
3	3.205	Selected
4	3.831	Selected
5	1.691	Not selected
6	2.278	Selected
7	4.187	Selected
8	1.186	Not selected
9	4.301	Selected
10	3.123	Selected
11	2.133	Selected
12	0.729	Not selected
13	2.142	Selected
14	3.512	Selected
15	3.11	Selected
16	4.263	Selected
17	2.133	Selected
18	4.173	Selected
19	5.502	Selected

20	0.953	Not selected
21	3.548	Selected
22	4.451	Selected
23	4.051	Selected
24	0.212	Not selected
25	4.714	Selected
26	1.431	Not selected
27	7.626	Selected
28	3.803	Selected
29	3.406	Selected
30	2.245	Selected
31	2.211	Selected
32	1.301	Not selected
33	3.734	Selected
34	4.735	Selected
35	3.364	Selected
36	0.956	Not selected
37	3.438	Selected
38	5.487	Selected
39	3.755	Selected
40	1.831	Not selected
41	2.274	Selected
42	2.313	Selected
43	1.996	Selected
44	3.085	Selected
45	0.491	Not Selected
46	2.604	Selected
47	2.211	Selected
48	2.699	Selected
49	3.323	Selected
50	3.542	Selected

Reliability

The reliability of test can be defined as the correlation between two or more sets of scores on equivalent tests from the same group of individuals. A test score is called reliable when we have reasons for believing the score to be stable and trust worthy. Stability and trust worthiness depend upon the degree to which the score is an index of "true-ability" free from chance error. Test-retest (repetition) method was used to arrive at the reliability of the tool. Repetition of a test is the simplest method of determining the agreement

between the two set of scores; the test is given and repeated on the same group; and the correlation computed between the first and second set of scores. Given sufficient time between the two tests the administration results show the stability of the test scores. The value of correlation co-efficient shows that there is high positive degree of correlation between the two tests and are given in Table-2.

Table 2: Reliability Co-Efficient of Blended Learning

S.No.	Method of Reliability	Values
1.	Test-retest (Repetition)	0.82
2	Split-Half	0.87

Validity

The appropriateness, meaningfulness and usefulness of the specific inferences made form test scores. In research, if findings are to be appropriate, meaningful and useful, they need to be valid. The first essential quality of valid test is that it should be highly reliable. Besides, the content or face validity, the investigator intended to arrive intrinsic validity. Guilford (1950) defined the intrinsic validity as "the degree to which a test measures what it measures." The square root of reliability gives the intrinsic validity. Therefore, the intrinsic validity of Blended Learning scale is 0.86.

DESCRIPTION OF THE FINAL TOOL

The final tool with 40 positive and negative statements was prepared in English version with 5-point rating scale based on Likert's type. The scoring procedure for the tool with the option Strongly Agree as 5, Agree as 4, Undecided as 3, Disagree 2 and Strongly Disagree as 1, for positive statements. For negative statements it is reversed as strongly disagree is given 5, disagree is given 4, Undecided score as 3, agree score as 2, and strongly agree 1. The minimum score for the tool is '40' and maximum score of the tool is 200.

FINAL TOOL
BLENDED LEARNING SCALE

Strongly Agree (SA)   Agree (A)   Neutral (N)
Disagree (DA)   Strongly disagree (SDA)

S.No	Statements	SA	A	N	DA	SDA
1	Blended learning programs provide a safer learning environment					
2	Learning English through blended learning is the best choice for any student.					
3	I was not satisfied with the overall learning Experience in Blended Learning Programme					

4	Blended learning increases engagement by providing different opportunities for student engagement using digital engagement tools					
5	Through digital learning and engagement tools, educators can create a more fun and engaging learning environment rather than simply reading text off a slide over video software.					
6	Many schools and training organizations are starting to use blended learning and it is certain to become more and more popular in the future.					
7	Students have more autonomy over their learning In English subject					
8	A sense of autonomy and control over their learning experience is essential for success.					
9	Blended learning adapts students needs in learning English subject					
10	Blended Learning Programme portion stimulated my desire not to learn the English subject					
11	In blended learning automatic speech recognition technology built-in that gives you instant feedback on your pronunciation while you are learning					
12	Access and enroll more students with blended learning programs					
13	I am not comfortable interacting with online Computer communication technologies. (Email, Instant Messaging, etc.)					
14	Learning English through blended learning is the best choice for any student.					
15	An important benefit of blended learning is that it is flexible to all types of learners					
16	Implementing blended learning with Course Key					
17	Students had more opportunities to discuss their reading difficulties during group discussions					
18	Online reading activities enabled students to extensively practice what they had learned in the on-site instruction without the limitations of time and location.					
19	The goals of the module is not to meet my need					
20	The goal of the module are suitable with my level and competency					
21	Content distribution is not distributed logically each week					
22	In blended learning interactive quizzes to learn how to say the phrases and words.					

23	Blended learning provide effective assessment and feedback, support the interactive design of the video lectures					
24	It brings the benefits of face-to-face interactions into the Blended learning environment.					
25	Blended learning support flexibility and openness and provide space for self-organized and networked learning					
26	Control features for video clip were appreciate (play, repeat, full screen, stop and pause)					
27	In Blended learning where learners can define their own objectives, present their own view, and collaboratively create and share knowledge.					
28	A different color can highlight pieces of information that are considered important					
29	Using English language for Blended learning to meet the wide range of learners from different countries and cultures					
30	Blended learning provide collaborative video annotation tools for English subject					
31	I learned a great deal from discussion through the Blended Learning Programme.					
32	I enjoyed collaborating with others during Blended Learning Programme					
33	Sharing of information during Blended Learning Programme helped me to learn English subjects in a better way					
34	I take more responsibility in learning when it is taught through Blended Learning Programme.					
35	blended e-learning enhanced students' learning performance					
36	blended e-learning facilitated students' attitudes toward the course with three aspects, cognition, skill, and attitude					
37	Teachers often follow and support us during blended learning process					
38	In Blended learning educational content is well-linked					
39	I feel that use of technology within the Blended Learning Programme fostered a better understanding of the topic					
40	Course contents given in the Blended Learning Programme were not clearly presented to me					

CONCLUSION

This research tool focuses on gathering information about the Blended learning among higher secondary school students. Blended

Learning is a strategy that creates a more integrated approach to teaching learning process where different learning environments like Face-to-Face, online, communal networking etc. are mixed with a objective to provide the most efficient and effective instruction experience.

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