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Research Article

Construction And Validation Of A Scale On Virtual Learning Among College Students In Chennai District

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ABSTRACT

Virtual learning environment is a good choice for people who enjoy learning on their own, without restrictions on space, pace and time. Some virtual learning options have classes to attend at scheduled times, while others allow you to learn at your own pace. Educators are becoming aware that open, unguided asynchronous online discussion forums can be ineffective. Students may not involve in open discussions on time with attention if they are not directed at specific learning or assessment activities. Most online learning management systems support collaborative learning and small group work, which are widely recognized as desirable educational practices. Since college students are such a wide users of technology, it is important to examine the level of Virtual Learning among them. So, the investigator has decided to construct and validate a scale to measure the level of Virtual Learning among them in Chennai city and succeeded in it.

Key words: *Virtual Learning, College Students, Collaborative Learning.*

INTRODUCTION

Virtual learning refers to an environment where students study a digital-based curriculum taught by instructors through online. This instruction can take place either in a self-paced (asynchronous) environment or in a real-time (synchronous) environment. While we are thinking about virtual learning no one can forget about the impact on the teachers themselves—the impact that virtual learning opportunities are having for teachers in their own professional learning and development. Organizations which seek to adopt online education are quickly realizing that it is not a cheap or easy option. Online education requires a great deal of resources and careful planning. Some of the strategies used as part of this level of planning include breaking large numbers of students into smaller groups, assigning them specific tasks, and providing them with direction and specific guidance, and setting timelines for discussion. Educators are becoming aware that open, unguided asynchronous online discussion forums can be ineffective. Students will not spend their time and attention in open ended discussion if they are not directed at specific learning or assessment activities. Most online learning management systems support collaborative learning and small group work, which are widely recognized as desirable educational practices. Hence the investigators decided to construct and validated a scale on Virtual Learning.

OBJECTIVE

i. To construct a draft scale on Virtual Learning to measure the Level of Virtual Learning of college students.
ii. To validate the constructed draft scale statistically and finalise it.

METHOD OF THE STUDY

Normative survey method was adopted for the present study.

SAMPLE

Random sampling technique was used to collect the data from the college students in Chennai district.

Construction of a Scale on Virtual Learning

As there is no suitable tool available to measure the level of virtual learning of the college students, the investigator has decided to construct and validate a suitable one. The draft scale was prepared from the reviews related to the topic and web resources. The tool was doubly validated firstly Using experts' validation and secondly Likert's item wise analysis . Some of the items in the draft scale were removed and some are updated based on the opinion sought from the experts in the field of education and professors in higher education. the Likert's Item wise analysis was found using the following procedure. The updated scale was administered among hundred (100) college students to ensure the validity of each items in it. Their responses were recorded. Their responses were arranged either on descending or ascending order of their score. The top and bottom 27% of the respondents were considered as "Upper and Lower group". Likert's Item wise analysis was used to find its validity. The items which carry the Likert Value '1' and above were retained and the rest were removed. Thus, the validity of the scale was found using Expert validation and Likert's Item wise Analysis.

The Likert- type scale calls for graded response to each statement on a five-point scale ranging from "Always" to "Never". The points are usually denoted by 'ALWAYS', 'OFTEN', 'SOMETIMES', 'RARELY' and 'NEVER'. The different points on the scale are assigned different arbitrary weights. For example, 5, 4, 3, 2 and 1 in the order of "Always" response to "Never" response for the positive statements. Here the "Always" response bears a weight of 5. The total scores for an individual can be obtained by adding his / her scores for all the individual items.

ii. Secondly, the same tool was validated using "Item Total Correlation Method". The individual Level of Virtual Learning Scale scores for all the 100 college students were found out. They were ranked from the highest to the lowest score.

Then 27% of the subjects (high) with the highest total scores and 27% of subjects (low) with the lowest total scores were sorted out for the purpose of item selection. The high and low groups thus selected formed the criterion groups and each group was made up of 27 college students.

Thus for all the 35 statements the number of responses coming under each category was found out and 't' values for all 35 statements were calculated (vide: Table 1).

The value of 't' is a measure of the extent to which a given statement differentiates between the high and low groups. If the 't' value is equal to or greater than 1.75 it indicates that the average response of the high and low groups to statement differs significantly, provided there are 21 (or) more subjects in the high group and also in the low group (Edwards,1957). In the present study, there are 25 subjects each in the high and low groups. The total number of subjects involved in the pilot study was hundred(100). As many as 30 statements, having the highest 't' value were chosen in order to form the final scale. An individual score ranges from 30 to 150. The maximum score for the scale is 150.

Reliability of the Scale

Test- retest method was used to find the coefficient of reliability of the tool. The scale on "Virtual Learning" was administered among 100 college students. After a time gap of fifteen days the same scale was administered among the same sample. Their scores were recorded. Later, Pearsons Product moment coefficient of correlation was found between the two scores and it was found to be 0.75. Hence, the scale was found to be highly reliable.

Table 1 Rank Order Of Items In The Level Of Virtual Learning Scale Based On 'T' Values

S.NO	't' VALUE	SELECTED/NOT SELECTED
1.	3.03	**Selected**
2.	2.90	**Selected**
3.	2.24	**Selected**
4	3.04	**Selected**
5	1.40	Not Selected
6	4.54	**Selected**
7	2.76	**Selected**
8	0.37	Not Selected
9	2.58	**Selected**
10	0.64	Not Selected
11	3.40	**Selected**
12	3.53	**Selected**
13	2.93	**Selected**
14	1.19	Not Selected
15	3.11	**Selected**
16	3.27	**Selected**
17	2.93	**Selected**
18	2.51	**Selected**
19	2.76	**Selected**
20	4.01	**Selected**

21	2.90	**Selected**
22	3.04	**Selected**
23	0.52	Not Selected
25	3.48	**Selected**
26	5.14	**Selected**
27	3.75	**Selected**
28	3.22	**Selected**
29	2.58	**Selected**
30	2.41	**Selected**
31	2.41	**Selected**
32	2.76	**Selected**
33	2.96	**Selected**
34	4.75	**Selected**
35	4.96	**Selected**

The level of Virtual Learning scale has construct validity as the items were selected having the 't' value of more than 1.75 (Edwards, 1957). Its intrinsic validity was found to be 0.79. The reliability of this scale by test – retest method (consistency) followed by the use of spearman–brown prophecy formula is found to be 0.63. Thus, a scale on Virtual Learning was found to be highly valid.

CONCLUSION:

The tool namely "Scale on Virtual Learning" was hence constructed and also validated by the prescribed norms.

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