

DEVELOPMENT AND STANDARDISATION OF e-LEARNING ATTITUDE SCALE (e- LAS)

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ABSTRACT

e- Learning is commonly referred to the intentional use of networked information and communications technology in teaching and learning. The growing interest in e-learning seems to be coming from several directions. These include organizations that have traditionally offered distance education programs either in a single, dual or mixed mode setting. The investigators decided to construct and validate e-learning attitude scale as per the standard procedure and norms. The scale has emerged successfully.

Keywords : e-learning, attitude.

e-LEARNING ATTITUDE

e- Learning is commonly referred to the intentional use of networked information and communications technology in teaching and learning.

The term e- Learning comprises a lot more than online learning, virtual learning, distributed learning, networked or web-based learning. As the letter “e” in e-learning stands for the word “electronic”, e- Learning would incorporate all educational activities that are carried out by individuals or groups working online or offline, and synchronously or asynchronously via networked or standalone computers and other electronic devices.

The growth of e- Learning is directly related to the increasing access to information and communications technology, as well it’s decreasing cost. The fundamental obstacle to the growth of e- Learning is lack of access to the necessary technology infrastructure, for without it there can be no e- Learning. Poor or insufficient technology infrastructure is just as bad, as it can lead to unsavory experiences that can cause more damage than good to teachers, students and the learning experience.

Attitudes towards e-Learning

The inequalities between the diffusion and use of New Information and Communication Technologies are still there. Bridging the gap requires more Education and Training in terms of both quantity and quality. e-Learning probably is one of the means by which education and training can reach greater number of people especially that development of e-Learning platforms and open source systems contributed to the ease of accessing knowledge at the higher education level and training both pre and in service.

Development of the Scale

As there is no suitable scale available to study the college students' attitude towards e-learning, the investigator has decided to construct and standardize a scale to measure the college students' attitude towards e-learning. As the first steps the investigators collected variety of information from various sources like website search, Journals, Books, experts in colleges and in universities. It is of 'Likert type scale' having as many as 45 statements. They were both favourably (26) and unfavourably (19) worded. The statements were categorized with the expert's opinion. Each statement is set against a five - point scale of 'Strongly Agree' 'Agree', 'Undecided' 'Disagree', 'Strongly Disagree' and arbitrary weights of 5,4,3,2, and 1 are given in that order for the favourably worded statement and the scoring is reversed for the unfavourably worded statements. The scores in this scale range from 45 to 225.

Pilot Study of the Scale

This scale of 45 statements intended for the pilot study was administered to the sample of as many as 100 students studying in the Arts and science colleges. Then their responses have been scored carefully and arranged in the descending order from the highest scorer to the lowest scorer. Then they were subjected to item analysis.

Item Analysis

The next step in the standardization of an e-learning attitude scale after pilot study is to find out the 't' value of each statement, which forms the basis for item selection in order to build up the final scale. The Likert type scale calls for a graded response to each statement on a five-point scale ranging from 'Strongly Agree' to 'Strongly Disagree'. The individual score for all the 100 students were found out and they were ranked from the highest to the lowest score. Then 25% of the subjects (High) with the highest total scores and 25% of the subjects (low) with the lowest total scores were sorted out for the purpose of item selection. The high and the low groups, thus selected, formed the criterion groups and each group was made up of 25 students (Edward.L.Allen., 1957). It may be recalled that each statement is followed by five different responses of 'SA', 'A', 'UD', 'DA', and 'SD' in the e-learning attitude scale. As already indicated weights are given for the response category in respect of each statement. Then each statement was taken individually and the

number of students who responded 'SA', 'A', 'UD', "DA", 'SD' was found out in both the high and low groups separately. Thus for all the 45 statements, the number of students coming under each category was found out separately for both the high and the low group. The value of 't' is a measure of the extent to which a given statement differentiates between the high and low group. 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 a statement differs significantly, provided there are 25 or more subjects in the high group and also in the low group (Edward.L.Allen., 1957).

TABLE - 1

RANK ORDER OF ITEMS IN e-LEARNING ATTITUDE SCALE BASED ON 't' VALUES

| Rank Order | NATURE OF STATEMENT | "t" VALUE | ORIGINAL Serial Number | ITEM SELECTED |
|------------|---------------------|-----------|------------------------|---------------|
| 1 | Positive | 0.02 | 38 | Not Selected |
| 2 | Positive | 0.28 | 10 | Not Selected |
| 3 | Positive | 0.31 | 4 | Not Selected |
| 4 | Positive | 0.53 | 34 | Not Selected |
| 5 | Negative | 0.54 | 28 | Not Selected |
| 6 | Positive | 0.63 | 29 | Not Selected |
| 7 | Positive | 0.72 | 45 | Not Selected |
| 8 | Positive | 0.83 | 33 | Not Selected |
| 9 | Positive | 0.88 | 40 | Not Selected |
| 10 | Negative | 0.98 | 21 | Not Selected |
| 11 | Negative | 0.99 | 43 | Not Selected |
| 12 | Positive | 1.11 | 9 | Not Selected |
| 13 | Positive | 1.16 | 30 | Not Selected |
| 14 | Negative | 1.20 | 22 | Not Selected |

| | | | | |
|----|----------|------|----|--------------|
| 15 | Negative | 1.31 | 8 | Not Selected |
| 16 | Positive | 1.39 | 35 | Not Selected |
| 17 | Positive | 1.43 | 7 | Not Selected |
| 18 | Positive | 1.81 | 44 | Not Selected |
| 19 | Negative | 2.28 | 39 | Selected |
| 20 | Positive | 2.36 | 27 | Selected |
| 21 | Negative | 2.37 | 23 | Not Selected |
| 22 | Negative | 2.43 | 26 | Selected |
| 23 | Positive | 2.44 | 31 | Selected |
| 24 | Positive | 2.44 | 41 | Selected |
| 25 | Negative | 2.55 | 36 | Selected |
| 26 | Positive | 2.57 | 12 | Selected |
| 27 | Negative | 2.75 | 13 | Selected |
| 28 | Positive | 2.89 | 25 | Selected |
| 29 | Negative | 2.95 | 14 | Selected |
| 30 | Positive | 3.04 | 20 | Selected |
| 31 | Positive | 3.11 | 32 | Selected |
| 32 | Negative | 3.35 | 2 | Selected |
| 33 | Positive | 3.54 | 42 | Selected |
| 34 | Negative | 3.59 | 3 | Selected |

| | | | | |
|-----------|-----------------|-------------|-----------|---------------------|
| 35 | Positive | 3.62 | 15 | Selected |
| 36 | Negative | 3.84 | 18 | Selected |
| 37 | Positive | 3.87 | 16 | Selected |
| 38 | Positive | 4.00 | 6 | Selected |
| 39 | Negative | 4.23 | 11 | Selected |
| 40 | Positive | 4.53 | 37 | Selected |
| 41 | Negative | 4.63 | 24 | Selected |
| 42 | Negative | 4.74 | 1 | Selected |
| 43 | Negative | 4.81 | 17 | Not Selected |
| 44 | Positive | 5.21 | 19 | Selected |
| 45 | Negative | 5.41 | 5 | Selected |

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 being 100. As many as 25 statements having the highest 't' Values have been chosen in order to form the final scale (Table-1).

Scoring Procedure

The scale has as many as 13 favorably worded statements and 12 unfavorably worded statements the scoring procedure is given in the table furnished below:

| Nature of the Statement | Strongly Agree | Agree | Undecided | Disagree | Strongly Disagree |
|-------------------------|----------------|-------|-----------|----------|-------------------|
| Favourably Worded | 5 | 4 | 3 | 2 | 1 |
| Unfavourably Worded | 1 | 2 | 3 | 4 | 5 |

The score ranges from 45 to 225. The maximum score that one can get in this is 225. The level of the scale was given below.

| Level | Range of scores |
|-----------------------|--------------------|
| Favourable Attitude | Up to 119 |
| Neutral Attitude | Above 75 up to 119 |
| Unfavourable Attitude | Above 75 |

Validity

e- Learning attitude scale has construct validity as items were selected having the 't' values Equal to or more than 1.75 (Edwards, 1975). Its intrinsic validity was found to be 0.70 which clearly states that the scale is valid.

Reliability

The reliability of this scale by split-half technique (Consistency) followed by the use of Spearman - Brown prophecy formula was found to be 0.84 and hence the scale is reliable.

Conclusion

Thus the investigators constructed and validated a e-learning attitude scale (e-LAS) and Contributed it to the field of education.

Reference

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