Construction of Teacher's Attitude Scale towards Online Mode of Education

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Abstract

The purpose of this study was to develop an attitude scale which measures the attitude of secondary school teachers towards Online Mode of Education. For items writing of scale, criteria given by Likert (1932) was used. The first draft of test containing 38 items was administered on a sample of 272 secondary school teachers selected from government senior secondary schools. The 't' was computed as recommended by Edwards (1957). Thurston (1967) suggested that 't' value equal to or greater than 1.75 may be considered significant. So, the top 32 statements with the largest 't' values (greater than 1.75) was retained as final draft of the scale. The reliability of scale was 0.90 and content validity of the attitude scale was determined while considering the items in the scale in preliminary draft and getting the language of each item checked by language expert.

Keywords: Likert Scale, Online, Planning, Reliability and Validity.

Introduction

The word attitude (from Latin aptus) is defined within the framework of social psychology as a subjective or mental preparation for action. An attitude is "a relatively enduring organization of beliefs, feelings, and behavioural tendencies towards socially significant objects, groups, events or symbols" (Hogg & Vaughan 2005, p. 150). Attitude means the individual's prevailing tendency to respond favourably or unfavourably to an object (person or group of people, institutions or events). Attitudes can be positive (values) or negative (prejudice). Attitude is our evaluation of a person, an idea, or an object. Attitudes refer to our overall evaluations of people, groups, and objects in our social world. Reporting an attitude involves making a decision concerning liking versus disliking or favouring versus disfavouring an attitude object. Attitudes are evaluations people make about objects, ideas, events, or other people. Attitudes can be positive or negative. Explicit Attitudes are conscious beliefs that can guide decisions and behaviour. Implicit Attitudes are unconscious beliefs that can still influence decisions and behaviour. All digital tools have created 'new social interactions' (Ranker, 2008). In recent years, information and communication tools have impacted our social life. Digital technology has had a big influence on these changes in the past three decades. Education systems cannot be unaware to all these changes in this digital age. In practice, digital tools provide new teaching and learning environments and "trigger a different kind of relationship between the teachers, the learners, and what is being learned" (Laurillard, 2013). The concepts such as online learning, e-learning computer-based instruction, virtual education, multimedia learning, and web/internet-based training are now buzz words. For the development of attitude scale, I reviewed 25 studies. The results show that digital tools help teachers to integrate literacy practices, provide different literacy practices for students. Digital tools positively impact the teaching and learning process by creating opportunities to create, share, and collaborate or students. Students also use and create multimodal hybrid texts by using digital tools, which also helps students to improve their abilities to use digital tools. In Indian context very few scale are available which measures the attitude of teacher's towards online mode of education. After going through the review of related literature and its assistance, an attitude scale was developed and standardized by using the Likert's (1932) Method. The procedure adopted in the development of attitude scale is as under.

Methodology - Development Process of Attitude Scale

Selection of Statements for Preliminary Draft: The criteria for writing statements suggested by Wang (1932), Thurstone and Chave (1929), Likert (1932), Bird (1940) and Edward and Kilpatrick (1948) was used. The statements were prepared by using different primary and secondary sources of information and discussed with the teachers of the Department of Education and language & subject experts for their suggestions. As a result of it some items were rejected, whereas some items were improved and revised. After the final approval of the experts, the preliminary draft of scale was developed by arranging the items in random order. After this exercise 38 items were retained for the first draft. Every item was rated on five-point scale as suggested by Likert i.e. Strongly Agree (SA), Agree (A), Uncertain (U), Disagree (D), Strongly Disagree (SD). Each of the five points were given numerical values ranging from 1 to 5 all positive statements were to be evaluated in such a way that strongly agree carried the value of 5 and strongly disagree the value of 1 and three points has proportionate value i.e. 4,3, and 2. The process is reversed in case of negative items. The total score on the scale for each respondent was obtained by adding the scores of individual items in the scale. The first draft of test containing 38 items was then administered by investigator personally on a sample of 272 secondary school teachers selected from Government Senior Secondary Schools of District Mandi, Himachal Pradesh. The purpose of study was made clear to them. As there was no time limit for completing the scale, teachers took on an average of 20 to 30 minutes to complete the scale. Then test booklets were collected and scoring was done for every item on five point rating scale. After scoring the test booklets were arranged in descending order of score for item analysis.

Item Analysis: After scoring the responses of 272 secondary school teachers, the answer-books were arranged in order by keeping highest scores at the top and lowest at the bottom. Then teachers with 25 per cent top and 25 per cent bottom scores were taken for item analysis. The middle answer-books were weeded out and not taken for future analysis. Then 't'-ratio for the difference in the mean of high and low groups was computed for each statement. The 't' was computed by the formula recommended by Edwards (1957). The 't' value for all 38 statements were computed and arranged in descending order. Thurston (1961) suggested that 't' value equal to or greater than 1.75 may be considered significant. So only those items having 't' values equal to or greater than 1.75 were selected for the final draft. After arranging the statements in descending order according to their 't' values the investigator selected 32 top statements with the largest 't' values and removed 6 items which have less 't' value than 1.75 . The 32 selected statements (Item no. 4, 7, 12, 17, 18, 21 and 31are negative items & marked as "*" in the scale) were put in the final draft of the scale as **Annexure-1**.

Reliability and Validity of the Attitude Scale: In order to obtain the reliability of the scale, the items were divided into two halves by taking odd items: 1, 3, 5, 7, 9, 11, 13, 15, 17, 19, 21, 23,25,27,29, 31 to one half and even items 2, 4, 6, 8, 10, 12, 14, 16, 18, 20, 22, 24, 26,28,30,32 to second half. The reliability of the attitude scale was obtained by split half method. The correlation between the scores of the two halves of the attitude scale was computed by product-moment method. The coefficient of correlation came out to be 0.86. This gives the reliability of the half scale. The reliability of full scale was computed with the help of Spearman-Brown Prophecy formula. The reliability co-efficient of full scale come out to be 0.90 which is considered to be quite satisfactory. The content validity of the attitude scale was determined while considering the items in the scale in preliminary draft and getting the language of each item checked by language expert. For the selection of items for the final draft the item analysis was performed on the extreme groups. Thus 32 items selected for the final draft were those, which differentiate between high and low scoring groups. The differentiation was taken as evidence for the validity of the scale.

Conclusion

This scale developed to access the attitude of teachers towards Online Mode of Education is a valid and reliable scale. The 32 selected statements were put in the final draft of the scale as Annexure-1.

Annexure - 1
Teacher's Attitude towards Online Mode of Education

Name:…………………………….
Sex: Male/Female   **Location of School:** Rural/Urban   **Type of Management of the School:** Govt./Private
Type of School: Residential/Non-Residential   **Medium of Instruction:** Hindi/English

Instructions

There are 32 items in this scale. Read each statement carefully and then mark your answer in the sheet. Record your first impression, the feeling that comes to your mind, as you read the items. Therefore you are requested to indicate the extent of your agreement with respect to the following statement by putting a tick mark (√) against each item in the five point rating scale. The data collected from this attitude scale will kept confidential.

SA=Strongly Agree, A=Agree, U=Undecided, D=Disagree and SD=Strongly Disagree

Sr.	Statement	SA	A	U	D	SD
1.	I have online accounts like WhatsApp, YouTube or Google platform as I consider online mode a necessity of the present time.					
2.	I prefer online mode of education over face to face teaching.					
3.	I feel students have developed liking for online mode of education over face to face teaching.					
4.*	I believe social networks such as WhatsApp, YouTube or Google platform cannot be effectively used in teaching. *					
5.	I believe that education can be imparted online also in the same effective manner as face to face education.					
6.	I believe that at secondary school level education cannot be imparted effectively through online mode.					
7.*	Student's subject related problems cannot be solved appropriately through online means of education.*					
8.	Student's academic performance can be enhanced through online modes of education.					
9.	I think all school teachers are not exactly, technically equipped to online modes of education.					
10.	I believe that students are smart & psychologically prepared to online mode of education.					
11.	I believe that all school students may not have necessary facilities available with them to receive online education at home.					
12.*	I believe using e-learning mode of education will not improve the quality of my work.*					
13.	It is difficult for me to become proficient in the use of all digital modes & e-learning tools.					
14.	Normally, I like to discuss about new e-learning innovations with my colleagues.					
15.	I think it is easier to revise electronic educational materials than printed material.					
16.	Delivering a lecture through electronic technologies from home is very difficult.					
17.*	I feel uncomfortable reading a book on a computer screen than a physical text book.*					
18.*	E-learning do not increases learners' social isolation.*					
19.	On the whole, I am satisfied with the online interaction with students.					
20.	I have no technology-related anxiety in using online mode of education.					
21.*	E-learning don't support child centred approach to education.*					
22.	E-learning allows educators to develop and improve their teaching /tutoring styles.					
23.	E-learning platforms allow teachers to stay connected to their students beyond the school hours in order to exchange resources, ideas and pedagogical practices					
24.	Online platforms allow teacher to develop and create materials according to schedules.					
25.	Digital interventions pose challenges to the teacher to be versatile and creative in order to attract the attention of their students.					
26	Online platforms allow staying connected with colleagues from all over the world, as well as to share ideas and gain inspiration.					
27.	Online mode of learning allows freedom to the students to choose when, where, and how they will take a desired course.					
28.	E-learning requires strong self-motivation and time management skills.					
29.	Online learning offers greater transparency to parents in terms of how their children are preparing for school.					

30.	Learning through online is environment friendly & cost effective as information is shared in an electronic format.				
31.*	It does not contribute to better communication between teachers and parents.*				
32.	In online mode of learning teacher receives constant feedback from their students about whether they understand the material or if it is interesting to them.				

Note: Starred items are negative items.

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