

## Development and validation of tool to measure the attitude of the higher secondary students towards values

<sup>1</sup> Dr. B Tamilselvi, <sup>2</sup> Devi ST

<sup>1</sup> Associate Professor, Department of Education, Karpagam University, KAHE Coimbatore, Tamil Nadu, India

<sup>2</sup> Research Scholar, Department of Education Karpagam University, KAHE Coimbatore, Tamil Nadu, India

### Abstract

“Values comes from the Latin word Valere, which means ‘to be worth’ ‘to be strong’. Values are a set of principles or standards of behaviour; they are regarded desirable, important and held in high esteem by a particular society in which a person lives. Allport (1956) defines values as “a belief upon which a man acts by performance”. At the present time, the subject of value education is becoming increasingly prominent in educational discussion at all levels. There seems to be growing body of opinion in favour of devoting more time and effort in the schools to help pupils to achieve greater understanding and awareness of values. The higher secondary stage is a crucial period in the life of an individual. Values direct an individual to attain the goals. In other words, they shape the behaviour of individuals in accordance with the expectations of society. The values remind us of our roles, duties, responsibilities and obligations in our personal and social life. They are essential to preserve one’s own personal and social life. They are essential to preserve one’s own cultural heritage. Values lend credential to norms. An attempt has been made to develop and validate the tools to measure the attitude of the higher secondary students towards values by administering a well-structured scale to the subject. The sample consists of 100 students; 55 whom are males and 45 are females randomly selected from the higher secondary schools situated in Coimbatore District. Initially, it is developed with 76 general statements related to values. The scale was standardized by using the item analysis and finally 40 statements are retained for the final study. The present research discusses the development of the scale to measure the attitude of higher secondary students towards values and validating it through test-retest method.

**Keywords:** attitude, values, development, validation, reliability, validity

### Introduction

Values operate as criteria for making judgment between alternative courses of actions and they directly influence the quality of an individual’s behaviour and conduct. Values are like the nails that keep a train on track and help it move smoothly, quickly and purposefully and they provide motivation to a person who sticks to his own values at any cost, also ready to suffer and sacrifice for the sake of the same. In the profile of evolution of values, one’s family remains the nursery where the values originate and where they can be tended with care. Next to family, school is the place that provides the essential climate and nutrients for the nourishment, growth, development and stability of values. It is said that education refines mind. As Martin Luther King Junior has quoted, “Intelligence + Character; that is the goal of true education,” positive values should be inculcated along with academic pursuit among students at a tender age so as to groom them to be good citizens of the universe. The progress of a nation depends on the soundness of her education system and any education system pertaining to a country springs from the value system of that country. Hence, teaching learning process integrated with values becomes vital for the advancement of an individual, a society and a nation as a whole.

Educational researches on values and value education have proved the significance of sticking to the roots of good virtues even while the branches of the wisdom tree grow higher and higher nurtured by the wide scope provided by technology-

oriented education in this digital era. The present system of education only deals with syllabi framed by the organization of the Government or Non-Government officials. There is supposedly more ‘Education’ now, but there is also more corruption, more greed, more selfishness, more poverty, lack of sincerity and integrity. Many problems in society created by educated young students because of lack of morality. The aim is only to get marks and jobs. In this reason, we need the news that young boy become the leader of a gang of auto thieves. Students are in the ambition to get money but not to work hard. Nothing can be achieved in the absence of values. If our young students studying in schools are properly trained for making a livelihood through a proper channel, they would surely be good citizens of our country, based on the fact that “Values are caught and not taught”. Parents, teachers, peers, family and society should influence the students and his behavior. Parents and teachers must regulate their minds for values. Parents have to be wise enough to know that “my child is mine”, nevertheless has its own existence. This has a tendency of growth and let me allow it to grow”. The Ramamurthy committee Report (1990) recommended that the importing of value education should be an integral part of the entire educational process.

### Aim of the Study

To find out development and validation of tool to measure the attitude of the higher secondary students towards values.

**Need For the Construction of the Attitude-Measuring Tool**

The research conducted by the author was to study the attitude of the higher secondary students towards values, it was realized that a reliable tool should be constructed. Analyzing the previous studies conducted on value education, it has been uncovered that the standardized attitude scale relevant to values and value education were not readily accessible. Hence, the author found it essential to construct a tool that could measure the orientation of higher secondary students towards values and value education. The construction of attitude scale was intended to reflect how the students view on various values in relevance to intellectual, social, cultural, moral and spiritual aspects. It was also found significant to validate and standardize the tool, thus designed to emphasize its authenticity.

**Review of the Literature**

Zamin (1982) derived the relationship between social, religious and moral values of the students of class XI and their moral character, traits and personality adjustment. In contrast, the studies conducted by Samridhi and Yadav (2014) [4] examined the influence of values and academic achievement on vocational performance of arts students. The study has been conducted on a sample of 200 XI grade arts students of Rewari District senior secondary schools. Sherry and Verma’s Personal Value Questionnaire was used as a tool for measuring the values of arts students and Thurston Vocational Interest schedule was used to measure the Vocational performance of the arts students. Yadram had studied (2014) [8] a comparative study of value pattern among boys and girls of senior secondary school students. For developing the desirable values in the students, it is necessary to know the value pattern of the students. Study of values by Ojha and Mahesh Bhargava tool was used for the collecting of data. The data was analyzed by mean, ‘sd’ and ‘t’ value. The result indicates that there is no significant difference between boys and girls on the basis of means on theoretical, economical, political aesthetical religious and social values. Velmurugam and Balakrishnana (2014) [7] was conducted to investigate the value preferences of higher secondary students in relation to community and paternal education. The Value Preference Inventory constructed and validated by the investigator (2011) was used to collect the data. The result of the present study reveals that there is no significant difference between the higher secondary students belonging to different communities and with different level of parental education in their value preferences. The studies conducted by Kalivarthan (2008) [1] and Tamilarasi (2008) [5] revealed that the paternal education is an influential factor of value patterns of secondary and higher school students respectively.

**Objectives of the Study**

The main objectives of the study are;

- To develop and validate an attitude scale with respect to values for higher secondary school students.
- To estimate the reliability of the tool
- To estimate the validity of the tool

**Development of Attitude Scale in Relevance to Values**

The process to develop a reliable and valid tool through which the attitude of higher secondary students towards values and value education could be measured precisely had been executed systematically. The scale was a closed type of questions with positive as well as negative polarity in respect of intellectual, social, cultural, moral and spiritual dimensions. Since the scale was intended to enable the students to express their own ideas about values, the tool was constructed in such a way that each and every response of the individual would reflect his or her perception on values.

**Process of Construction of Attitude Scale**

The construction of the scale was carried out in the systematic steps as follows;

**1) Pooling of Items**

The statements reflecting different facets of Intellectual, Cultural, Social, Moral and Spiritual Values were collected from various sources. Some of them were drawn from the views expressed by great philosophers and some from the life history of many personalities whose life could be cited as role model for a virtuous living. Some of the statements were also framed from the experience of the investigator. Both positive and negative statements were considered to design the tool. The items pool was amounted to 76 in the initial stage. The attitude scale had been developed by the investigator after reviewing a range of literature on attitude towards values and value education and studying the test development procedures used for the development of the tool. Furthermore, the scale was modified according to the suggestions offered by teachers of schools and colleges and experts in the field of education.

**2) Description of the Items**

The investigator had designed a five-point rating scale with the responses - strongly agree, agree, neutral, disagree, and strongly disagree. The score is 5, 4,3,2,1 and vice versa for the positive statements and negative statements respectively. The distribution of the items in terms of the five selected dimensions of values along with their polarity is tabulated in the Table No.1

**Table 1:** Distribution of the Items

S. No	Dimensions	Positive Polarity Statements	Negative Polarity Statements
1.	Intellectual Values	1,3,4,6,9,10,12,13,14	2,5,7,8,11
2.	Cultural Values	15,17,18,20,21,22,23, 25,26,28	16,19,24,27
3.	Social Values	29,31,32,34,35,36,37,38,39,40, 41,42,43,44,45,46,47	30,33
4.	Moral Values	50,52,54,55,58,60,61,62	48,49,51,53,56,57,59
5.	Spiritual Values	64,65,66,67,70,71,72,73,74,75	63,68,69,76

**3) Item analysis**

Construction of reliable and valid tests requires quantitative information regarding the difficulty and discriminative power

of each item. Such information is provided by item analysis method as it helps to condense a test and increases its validity and reliability by indicating the item that can be discarded or

included. In order to know whether each test item has the difficulty value or not, the item was analyzed by arranging the scores of students from the highest to the lowest.

A pilot study was conducted with the 76 items framed. After having developed the attitude scale, the investigator administered it to a sample of 100 students studying in the higher secondary schools of Coimbatore District. The respondents were asked to put a tick mark ( ✓ ) against their preferred response for each of the given statement. Then all the test papers of 100 higher secondary students were scored carefully and the test papers were arranged in the descending order from the highest to lowest scores and subjected to the statistical treatment. 27% of the subjects with the highest total scores and 27% of subjects with the lowest total scores were sorted out for the purpose of the item selection based on the Difficulty Index and Discrimination Power.

**4) Difficulty Index**

After arranging the answer scripts in the descending order of marks, the top 27% of the corrected answer scripts were taken out. This formed the high group. The bottom 27% of the answer scripts were taken out. This formed the low group and the middle group was discarded. The difficulty index was computed by adding the correct responses to the items in the high group to the number of correct responses in the low group and dividing by the total number of students (Number of students from the low and high groups). The following formula is used to determine the difficulty index of a test item.

$$P = \frac{Ru + Rl}{N} \times 100$$

Where,

P = Item difficulty index,

R<sub>u</sub> = Number of correct responses from the upper group,

R<sub>l</sub> = Number of correct responses from the lower group and

N = Total number of Students who tried them.

**5) Discrimination power**

Item discrimination power is the quality which can clearly differentiate between the students in the upper level and those in the lower level. A test possesses adequate discriminating power when it is capable of differentiating between the high achieving and low achieving students. A commonly used discrimination power is simply the difference in proportion of correct response between the group of those scoring in the top 27% on the total test and the group scoring in the bottom 27% on the same test. The following formula is used to determine the discrimination power of a test item.

$$\text{Discrimination Power} = \frac{Ru - Rl}{1/2N}$$

Where,

R<sub>u</sub> = Number of correct responses from the upper group.

R<sub>l</sub> = Number of correct responses from the lower group.

N = Total number of Students who tried them.

**6) Selection of items**

After calculating the difficulty index and discrimination power in respect of all the 76 items, the following criteria were evolved for the selection of items. Items considered as too easy

and too difficult were discarded and only those items having a difficulty index ranging from 56 percent to 80 percent were chosen for the final test. Ambiguous questions were removed. The discrimination power was ranged from 0 to 1. Any discrimination power above 0.2 could be considered as good and below 0.2 as poor according to Robert. Thus, the difficulty index and discrimination power were found out for each of 76 items in respect of both the high and low group. Out of 76 items, based on the value of difficulty index ranging from 56 percent to 80 per cent and discrimination power above 0.2, 40 items were selected for the final study and remaining 36 items were discarded. Selections of items are tabulated in the Table No. 2.

**Table 2:** Selection of items for the attitude scale for values and value education

Item	t	S/NS	Item	t	S/NS	Item	t	S/NS
1	85.56	NS	26	83.70	NS	51	61.48	S
2	71.48	S	27	76.67	S	52	76.67	S
3	68.15	S	28	85.93	NS	53	66.30	S
4	80.74	NS	29	94.81	NS	54	78.89	S
5	47.04	NS	30	58.52	S	55	80.74	NS
6	87.78	NS	31	74.07	S	56	60.37	S
7	67.78	S	32	57.78	S	57	65.56	S
8	75.19	S	33	73.33	S	58	78.15	S
9	89.26	NS	34	80.37	S	59	70.37	S
10	80.37	S	35	73.33	S	60	81.85	NS
11	60.74	S	36	77.41	S	61	80.74	NS
12	84.81	NS	37	61.11	S	62	82.59	NS
13	84.44	NS	38	88.89	NS	63	69.63	S
14	87.78	NS	39	87.41	NS	64	79.63	S
15	87.78	NS	40	87.41	NS	65	81.11	NS
16	64.81	S	41	84.07	NS	66	82.59	NS
17	79.26	S	42	80.00	S	67	81.48	NS
18	72.22	S	43	82.22	NS	68	69.63	S
19	55.19	NS	44	82.96	NS	69	62.59	S
20	84.44	NS	45	81.85	NS	70	79.26	S
21	69.63	S	46	87.41	NS	71	78.89	S
22	85.19	NS	47	86.30	NS	72	83.33	NS
23	81.48	NS	48	63.32	S	73	79.63	S
24	56.30	S	49	64.81	S	74	74.81	S
25	86.30	NS	50	84.81	NS	75	81.48	NS
						76	68.15	S

S-Selected

NS-Not Selected

**Estimation of the Reliability of the Tool**

In order to find out the reliability of the tool, Test – Retest method is used. For this purpose, the test is applied to 100 students who were randomly selected. By applying the Test – Retest method, the co-efficient of correlation was found to be 0.7828, which is highly reliable one and the ‘r’ is found to be positive. The tool, therefore, is considered as highly reliable for the use of the descriptive study on the attitude of the sample on the five selected dimensions of values.

**Estimation of the Validity of the Tool**

In order to estimate the Content Validity of the tool based upon careful perusal of books, observations and the judgments on the subject matter specialty, the tool had been circulated to subject experts, teacher educators and Principals of the educational institutions. The above panel of members had gone through the data of questionnaire and gave their valuable suggestions and opinions in order to refine the same into a

suitable one to measure one’s attitude towards the selected values. Based on the suggestions and opinions obtained from the panel of experts, pruning of the items was carried out and some of the items were slightly modified to present a cogent questionnaire without any ambiguous statements so as to avoid any misinterpretation on the part of the samples selected for the study. The tool, therefore, used for this study had a content validity.

**Description of the Final Tool**

The final tool consists of 40 statements with regard to the attitude of the students towards the values with the following the five dimensions namely;

1. Intellectual Values
2. Cultural values
3. Social Values
4. Moral Values
5. Spiritual Values

Among the 40 statements, 20 are with the positive polarity and

20 are with the negative polarity. Since the tool is in the form of 5-point scale, the investigator has followed the scoring scheme mentioned in the Table No. 3.

**Table 3: Scoring Scheme**

Response on the 5 - Point Scale	Score for Statements with Positive Polarity	Score for Statements with Negative Polarity
SA (Strongly Agree)	5	1
A (Agree)	4	2
N (Neutral)	3	3
D (Disagree)	2	4
SD (Strongly Disagree)	1	5

The positive polarity statements as well as negative polarity statements are distributed with respect to the selected dimensions of values in the tool as presented in the Table No. 4.

**Table 4: Distribution of Statements with Respect to the Dimensions of Values**

S. No	Dimension	Positive Polarity Statements	Negative Polarity Statements
1.	Intellectual Values	2,5	1,3,4,6
2.	Cultural Values	8,9,10	7,11,12
3.	Social Values	14,15,17,18,19,20,21	13,16
4.	Moral Values	25,27,30,33	22,23,24,26,28,29,31,32
5.	Spiritual Values	36,37,38,39	34,35,40

On administering the tool, the possibility of scoring by the subject ranges from a maximum score of 200 to a minimum of 40.

**Implications of the Study**

The tool is a five point attitude scale based on intellectual, cultural, social, moral and spiritual values to measure the attitude of the higher secondary students towards values. When the values are inculcated along with the subjects definitely their behaviour, futuristic thinking, personality of the students will be enhanced. Therefore, more tool development and validation on values should be developed and valid among the future Generations.

**Conclusion**

The role of home, school and society cannot be neglected in the degradation of values. Fall in values is mainly due to non-conducive environment present in the schools. School education will definitely play a vital role in molding and nurturing the future life of an individual. Thus, the scale, developed by the investigator in order to be utilized for a descriptive study on the attitude of higher secondary students towards values has been standardized systematically and would be considered to be reliable and valid. The efficacy of this standardized tool would also be of much significance in presenting a quantifiable data for the researches in the field of education related to values.

**References**

1. Kalivarathan G. A study value pattern of secondary students in relation to certain selected variables. M.Phil, Education, Annamali University, 2008.

2. Narendra P Patil. Value education-A need indeed for secondary level, Education Plus, 2015; IV(1).
3. Richa Verma, Gul Muthur. Effect of movies on value orientation in adolescence, Journal of Community Guidance and Research. 2009; 26(3):267-275.
4. Samridhi wadwa, Yadav RK. Vocational preferences of XI grade arts students in relation their values and academic achievement. J of Educational and Psychological Research. 2014; 4(2).
5. Tamilarasi S. A study value pattern of secondary students in relation to certain selected variables. M.Phil, Education, Annamali University, 2008.
6. Tomy Joseph, Anish Mon KA. Human values development for nation building, New Frontiers in Education, 2013.
7. Velmurugan, Balakrishnana. Value preferences of higher secondary students in relations to community and parental education. Edutracks, 2014; 14(11).
8. Yadram. A Comparative study of value pattern among boys and girls of senior secondary school students. J of Educational and Psychological Research. 2014; 4(2).
9. Swami Vivekananda, <http://Human Values>
10. <http://www.edcationindia.net/download/research-abstract>
11. <http://www.ask.com/wiki/religious on values>