

## **Construction and Standardization of School Environment Scale**

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### **Abstract**

A tool is an important thing for a research. Without it, the research work cannot be accomplished. Basically a researcher mistakenly switches the meaning of methodology with that of tools. To some extent, this methodology dictates the tools to be used whereas the latter is a specific mechanism used to collect, manipulate, or interpret data. In the present study, School Environment scale has been constructed and standardized for the Higher Secondary School Teachers. This scale consists of 100 statements. The sample consists of 100 Higher Secondary School Teachers are randomly selected from the Cuddalore District. The 't' and 'r' value was used to standardize the tool and finally 55 statements were retained for the final form of the tool.

**Keywords:** Construction, Standardization and School and Environment Scale

### **Introduction**

School environment plays paramount role in imparting life skills to students. In turn life skills play a major role in molding future life of adolescents. Good school environment tends to moderate the negative effects of poor family environment on the child. The combined effect of good family environment and good school environment leads to successful life of adolescent in future. The school is the most dynamic place which keeps pace with the needs of the society. It should also develop in each individual the knowledge, interest, ideals, attitudes, habits, skills and powers, whereby he/she will find his/her right place in the social order and use that position to shape him/her and the society both towards the higher and nobler ends. The attainment of such objectives require proper school environment. The school is a social-psychological system i.e. principal and teachers working in a school constitute socially and psychologically interacting units and through their interactions, school acquires a land of distinct personality or a distinct atmosphere.

### **Operational Definition of the key Term**

#### **School environment**

It refers to the psycho-Social climate of the school as perceived by the students in school. It includes five dimensions – Teacher behavior, Classroom climate, Control and safety, Acceptance and rejection, and Facilities.

### Pilot Study

The investigator decided to design School Environment scale for school teachers. So, the investigator has prepared 100 statements of School Environment scale, with help of the Research supervisor and it has five dimensions. The investigator has decided to construct the scale with five point types indicating strongly agree, agree, uncertain, disagree and strongly disagree. The initial scrutiny of the statements for School Environment scale was done by the investigator with the help of the research supervisor.

From the prepared statements 100 items were retained. Among them, 20 statements were based on teacher behavior; 20 statements were related to classroom climate; 20 statements were related to control and safety; 20 statements were related to acceptance and rejection; 20 statements were related to facilities. The prepared items were given to experts. The experts constructively criticized and gave valuable suggestions. The wording of some of the statements was changed and modified. Thus 100 items were selected for draft scale; these statements were worded carefully in order to obtain the free expression of the respondents.

### Tryout of the Draft Scale

The investigator obtained the preliminary draft of the scale in printed form. The draft scale included 100 statements related to 5 dimensions. It was administered to 100 higher secondary school teachers.

### Scoring Procedure

Score procedures of interest in School Environment scale

S.No	Answer	Score
1	Strongly agree	5
2	Agree	4
3	Uncertain	3
4	Disagree	2
5	Strongly disagree	1

### Item Analysis

For finding the truthfulness of test items and inter-connectedness of different items in the same tool, item validity was calculated as it is very essential for selecting items in the final tool. From the responses obtained from 100 teachers on the draft tool, the sum of scores on each dimension of value scale was calculated. Then 'r' is calculated by correlating the individual item score and the corresponding component score. The correlation coefficient at 5% level of significance is 0.4 to 0.9 (Best, 1989), so the item having 'r' value between 0.4 and 0.9 are selected.

For further improvement and refinement of the scale, the tool was administered again to the sample. The scale was scored accordingly 't' value was calculated by identifying the high/low group. The total number of sample is taken as N which is multiplied by 0.27 and rounded off the result to the nearest whole number. This number is called 'n' (Stanely, 1978). By applying this simple method, the investigator identified the top 27% and the bottom 27% in other words the high and the low group. The 't' value for each item was computed. At 5% level of significance the table value is 1.96 have been retained. The final tool consists of 55 items (The detail is in the Table - 1).

**Table - 1**

<b>Section A (School Environment)</b>							
<b>Item No.</b>	<b>'t' Value</b>	<b>'r' Value</b>	<b>Significance P</b>	<b>Item No.</b>	<b>'t' Value</b>	<b>'r' Value</b>	<b>Significance P</b>
A1	3.190	0.541	S	A51	2.879	0.594	S
A2	2.893	0.517	S	A52	2.479	0.535	S
A3	0.025	0.024	NS	A53	0.091	0.072	NS
A4	2.972	0.603	S	A54	3.069	0.664	S
A5	3.671	0.524	S	A55	0.273	0.210	NS
A6	0.534	0.161	NS	A56	3.273	0.685	S
A7	2.978	0.539	S	A57	3.194	0.539	S
A8	0.031	0.047	NS	A58	2.950	0.517	S
A9	2.906	0.631	S	A59	0.853	0.129	NS
A10	0.175	0.192	NS	A60	4.016	0.642	S
A11	3.573	0.617	S	A61	3.063	0.683	S
A12	0.526	0.092	NS	A62	0.394	0.084	NS
A13	3.692	0.701	S	A63	2.682	0.592	S
A14	2.953	0.605	S	A64	0.759	0.193	NS
A15	0.371	0.239	NS	A65	2.936	0.648	S
A16	2.130	0.591	S	A66	0.402	0.117	NS
A17	0.537	0.028	NS	A67	0.537	0.028	NS
A18	3.091	0.714	S	A68	3.017	0.635	S
A19	0.602	0.028	NS	A69	0.269	0.110	NS
A20	2.590	0.673	S	A70	4.027	0.593	S
A21	0.968	0.301	NS	A71	2.809	0.682	S
A22	2.592	0.583	S	A72	2.379	0.621	S
A23	0.091	0.154	NS	A73	0.081	0.052	NS
A24	4.071	0.641	S	A74	3.538	0.782	S
A25	3.413	0.682	S	A75	3.009	0.528	S
A26	2.879	0.594	NS	A76	2.549	0.586	S
A27	2.479	0.535	S	A77	0.172	0.013	NS
A28	0.091	0.072	NS	A78	3.019	0.614	S

A29	3.069	0.664	NS	A79	0.635	0.062	NS
A30	0.273	0.210	S	A80	3.174	0.691	S
A31	0.273	0.085	NS	A81	2.943	0.558	S
A32	3.194	0.539	NS	A82	0.928	0.051	NS
A33	2.950	0.517	S	A83	2.753	0.621	S
A34	0.853	0.129	NS	A84	2.905	0.651	S
A35	4.016	0.642	S	A85	0.539	0.051	NS
A36	3.063	0.683	NS	A86	0.275	0.013	NS
A37	0.394	0.084	S	A87	3.175	0.651	S
A38	0.682	0.092	NS	A88	2.748	0.538	S
A39	2.759	0.793	S	A89	2.914	0.518	S
A40	2.936	0.648	NS	A90	0.159	0.035	NS
A41	2.879	0.594	NS	A91	2.793	0.648	S
A42	2.479	0.535	S	A92	0.162	0.036	NS
A43	0.091	0.072	S	A93	0.403	0.135	NS
A44	3.069	0.664	NS	A94	3.137	0.631	S
A45	0.275	0.013	NS	A95	0.069	0.047	NS
A46	3.175	0.651	S	A96	0.275	0.026	NS
A47	2.748	0.538	S	A97	3.204	0.628	S
A48	2.914	0.518	S	A98	0.859	0.204	NS
A49	0.159	0.035	NS	A99	0.539	0.042	NS
A50	0.304	0.135	NS	A100	3.216	0.647	S

S = selected\*

NS = Not selected\*

Here, the investigator has retained 55 selected statements only.

### **Preparation of the final form of the School Environment Scale**

In the present study, out of 100 statements 55 statements having the highest 't' values were selected, for the final scale.

### **Final form of the School Environment Scale**

The final form of the School Environment Scale consists of 55 statements, teacher behavior 12, classroom climate 9, control and safety 11, acceptance and rejection 12 and facilities 11, related to 5 dimensions.

**Table – 2**

S.No	Statements	Strongly Agree	Agree	Uncertain	Disagree	Strongly Disagree
<b>Teacher Behaviour</b>						
1	The school administration embraces us					
2	I provide immediate solution to the students' doubts.					
3	I am annoyed by the behavior of a few teachers who work with me.					
4	I am proud to be a teacher at my school.					
5	I strive to create an educationally competitive marriage among my students.					
6	I would like to establish discipline on the school campus and on the outside.					
7	I will be happy when parents try to meet me about the development of students.					
8	The head teacher will pay close attention to our behavior.					
9	I get annoyed when they fail to do the homework I give to students every day.					
10	All teachers will be friendly without discrimination.					
11	I will strive to develop my knowledge to suit the growing climate.					
12	I encourage my students to keep the school campus clean.					
<b>Classroom Climate</b>						
13	Classroom has ample space and seating.					
14	The classroom is well ventilated and well lit.					
15	The blackboard in the classroom is suitable for use.					
16	The fan is fitted to suit classrooms.					
17	All electric lights in the classroom provide adequate light.					
18	My classroom is equipped with a CCTV camera,					
19	Each classroom has a rubbish bin for littering.					
20	The laboratory has adequate laboratory equipment.					

21	I will use teaching equipment during my teaching.						
<b>Control and Safety</b>							
22	I think students should learn based on the ideas they teach.						
23	Students are never allowed to ask questions without my prior permission.						
24	We will take into account the views of students and parents when formulating company rules.						
24	All executive members of the organization operate in accordance with the rules and standards of the school.						
26	I will guide students to behave with discipline in the classroom.						
27	Students come to class on time.						
28	All members of the school administration operate under the direction of the head of the institution.						
29	Company control makes me feel autistic at times.						
30	I feel that my co-workers are my bulwark.						
31	Students with us will express their disagreement without hesitation.						
32	The school administration will encourage the implementation of rigorous activities in the school.						
<b>Acceptance and Rejection</b>							
33	I never allow students into the classroom who have not completed their homework.						
34	If students express opinions that contradict my opinion I will not accept it.						
35	I will observe the daily behaviors of students and record them in the transcript.						
36	Students will be urged to try to learn the lessons through his own experience.						
37	I would tell students to finish doing their jobs of their own free will.						
38	I do not care about the welfare of the students while teaching subjects.						
39	I am not worried about the future of the students.						
40	For students we talk about everything.						
41	I do not pay attention to the opinion of the students when they do not want to answer the questions of the students.						
42	I give students the opportunity to use their time to their own liking.						
43	I have been reviewing the comments of students.						

44	I give students the opportunity to use their time to their own liking.						
<b>Facilities</b>							
45	Our school has a rainwater harvesting tank.						
46	The library has books that students in our school need to practice learning.						
47	Our school has adequate computer facilities for students studying computer.						
48	Facilities are provided by our school for students to travel on government buses.						
49	Our school has accommodation for students.						
50	Our school has clean drinking water for students and the facility to maintain it.						
51	My school has adequate equipment to protect students in emergencies.						
52	Government scholarships are made available to students in our school.						
53	Our school has learning-oriented technical facilities for students.						
54	Students have enough sports equipment to participate in the sport of their choice.						
55	Our school has a facility to provide first aid to students.						

### Validity

The investigator established content validity, for the present research tool. The tool was given to experts. These experts constructively criticized and gave valuable suggestions. The wording of some of the statements was changed and modified and irrelevant statements were removed and the remaining statements were retained. Thus the content validity of the tool was established.

### Reliability

Internal consistency of the instrument was found out by Split half Method. The reliability coefficient by Spearman Brown formula was 0.892, which is significant at 0.01 level of significance. However, Sample Reliability was established by investigator using test re test method. School Environment Scale is administered to 100 higher secondary school teachers twice after a gap of 15 days. The Correlation Coefficient 'r' between the two tests are found to be 0.81. Hence the tool is highly reliable.

**Table - 3**

#### Reliability Coefficient of sub scale of School Environment Scale

	Subscales	Coefficient of Correlation
<b>A</b>	Teacher behavior	0.71
<b>B</b>	Classroom climate	0.74
<b>C</b>	Control and Safety	0.80

<b>D</b>	Acceptance and Rejection	0.73
<b>E</b>	Facilities	0.76

The high values of the correlation coefficients indicate the high reliability of the measuring tool.

### Conclusion

The study was aimed at the development of a valid and reliable instrument for measuring school environment of higher secondary school teachers. The tool has five dimensions namely: Teacher behavior, Classroom climate, Control and safety, Acceptance and rejection and Facilities. The scale will be useful for the teachers, student's teachers, administrators, school management in identifying school environment as well as taking measures for its improvement.

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