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CONSTRUCTION AND STANDARDIZATION OF TEACHER EFFECTIVENESS SCALE

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ABSTRACT :

The main aim of this study is to construct and validate a tool for measuring the teacher effectiveness of teachers teaching in the Kulgam district of Jammu and Kashmir. For the purpose of the study, simple random sampling technique has been used to select the sample. Originally, the scale consists of 99 items in which 60 items are positive and 39 are negative, covering four areas related to teacher effectiveness of High school teachers and the pilot study was administered for the sample of as many as 100 high school teachers. Later, for the standardization of the scale 't' test was done, based on the 't' value 54 statements were retained for the final study. Both the reliability and validity coefficient were subjected to 't' test separately. The level of significance was fixed by the formula suggested by Edwards (1969).

KEYWORDS : Teacher effectiveness, standardize, high school teachers, t- test, etc.

INTRODUCTION

Teacher is the key of educational system. Quality of Education is of utmost importance for development of any nation which in turn depends upon the excellence or effectiveness of teachers. An Effective teacher helps the students in achieving proposed learning outcomes. Parihar (2011) "viewed that effective teaching is the result of effective teachers who always achieve their goals that are either directly or indirectly related to student learning and the strategies implemented for achieving this purpose needs orientation and reorientation with shifting needs and priorities in teacher education." Education makes our life cultured, progressive and civilized, but this all cannot be fully possible without the effective teachers. The diverse problems in classrooms cannot be solved merely by adopting a slogan. Teacher quality has a long-lasting effect on student learning. It has been find out that students taught by an effective teacher just only for one year will remain ahead of his /her peers for at least the next few years. But unfortunately, if the students did not have an effective teacher, the negative effect on their achievements may not be fully remediated for up to two or three years. Effective teachers give extreme value to teaching and learning and they provide adequate feedback to students and assess their understanding capabilities and create positive environment for the teaching and learning process. They embellish their lessons by using their resources. They are always trying to improve and update their knowledge of teaching and learning keeping always in view the importance of student's future.
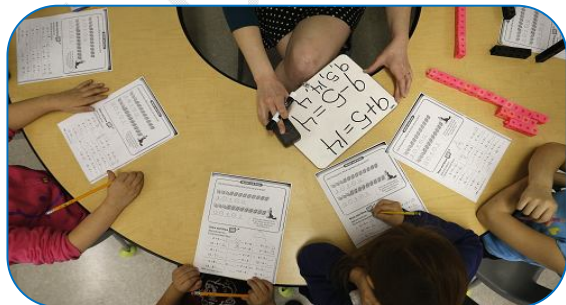
NEED AND IMPORTANCE OF THE STUDY.

Teacher effectiveness in all aspects is very essential to meet the growing demands of learning community. Globally, there is an overwhelming concern over the quality and relevance of education. Undoubtedly, quality of education is the direct result and outcome of the excellence of teachers. Highly

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effective teachers can have an enriching effect on the daily lives of children and their lifelong educational and career aspirations. Student's learning is considerably enhanced and affected by effective teachers. A study on teacher quality support the fact that effective teachers not only make students feel good about school and learning, but also have increased to a greater extent the student's academic achievement. An effective teacher makes the students skilled enough to stand with their counterparts of developed countries and to make the country socially and economically developed. To give quality education to students, to retain enrolled learners in the classroom, to raise the level of academic achievement, to tap potentialities of the students, to develop democratic qualities in students, to make them competent and skilful and to improve their total personality completely, teachers should not only be committed and devoted but should also be exemplary, devoted to the profession with expertise. Then it is possible that our nation will make progress by leaps and bounds. Only teachers have the power to control the wholesome development of educational system. It is their effort which results the students deep learning. Hence, it is clear in all respects that the teacher effectiveness has high need and importance that is why the investigator felt that there is an extreme need to study the teacher effectiveness of high school teachers.

OBJECTIVE
- The key rationale of this study is to construct and standardize the research tool which measures the teacher effectiveness.

DEVELOPMENT OF THE SCALE
As there is no suitable tool available to measure teacher effectiveness of high school teachers, keep this thing in consideration the investigator has decided to develop and standardise a scale to measure the teacher effectiveness of high school teachers. In order to develop the scale the investigator collected lot of information and prepared variety of items pertaining to subject knowledge, planning and preparation for teaching, classroom management and assessment skills, and teacher's personality.

METHODOLOGY
In order to develop the scale at the preliminary stage the investigator consulted many experts of the related area, referred many books, journals, web-sites, Ph.D thesis and also discussed with some high school teachers and gathered a sufficient information related to teacher effectiveness. The experts analysed the tool keeping in view the relevance of areas, item difficulty, language and clarity of each statement. After a careful scrutiny of each statement and by the consent of all the experts, 99 statements in which 60 positive and 39 negative statements were chosen to include in the initial draft covering broadly the four areas of the teacher effectiveness namely, Subject Knowledge (SK), Planning and Preparation for Teaching (PAPT), Classroom Management and Assessment Skills (CMAS), and Teacher's Personality (TP). For the purpose of its tryout, the teacher effectiveness scale was administered on a sample of 100 high school teachers randomly selected from kulgam district of Jammu and Kashmir. Respondents were asked to read the statements and answer frankly about each statement by putting a tick mark (√) in the column which is right according to them from the five given alternatives. After pilot study the next step for tool standardization is to calculate the't' value of each item which is a key component of item selection. For pilot study, the investigator selected a sample of 100 students and administered the scale. The papers were valued and scored. Positive Items score are calculated by 5, 4, 3, 2, and 1 for strongly agree, agree, undecided, disagree and strongly disagree respectively and for negative items 1,2,3,4, and 5 for strongly agree, agree, undecided, disagree and strongly disagree. Thus, one can get a maximum score of 495 and minimum score of 99. In this way the total score varies from 99 to 495, showing variation between least teacher-effectiveness to highest teacher effectiveness. According to the total score values, all the 100 respondents were arranged in descending order from the maximum score to the minimum score. As per the formula given by Allen Edward (1957), the high 25% of respondents and low 25%of the respondents were considered and taken for item selection based on't' value. Items with 't' value equal to 1.75 and above were selected for the final study and items

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with 't' value lower than 1.75 were rejected. The number of items selected on the basis of 't' value was 54 and rejected was 45. The 't' values of 99 items are given in the table -01

T -VALUES OF STATEMENTS OF TEACHER EFFECTIVENESS SCALE

Table-01

Item Number	't' value	Remarks	Final selection Of (TES)
1.	5.485	Selected	1.
2.	5.977	Selected	2
3.	3.412	Selected	3
4.	1.561	Not selected	×
5.	1.745	Not selected	×
6.	5.653	Selected	4
7.	1.247	Not selected	×
8.	5.764	Selected	×
9.	1.552	Not selected	×
10.	1.721	Not selected	×
11.	1.416	Not selected	×
12.	6.333	Selected	6
13.	6.134	Selected	7
14.	1.673	Not selected	×
15.	1.653	Not selected	×
16.	9.111	Selected	8
17.	2.240	Not selected	9
18.	6.467	Selected	10
19.	1.702	Not selected	×
20.	8.907	Selected	11
21.	1.260	Not selected	×
22.	7.005	Selected	12
23.	6.531	Selected	13
24.	1.565	Not selected	×
25.	1.316	Not selected	×
26.	8.512	Selected	14
27.	1.309	Not selected	×
28.	1.605	Not selected	×
29.	1.661	Not selected	×
30.	1.721	Not selected	×
31.	1.206	Not selected	×
32.	9.273	Selected	15
33.	1.644	Not selected	×
34.	4.608	Selected	16
35.	4.884	Selected	17
36.	4.333	Selected	18
37.	4.638	Selected	19
38.	5.111	Selected	20
39.	5.008	Selected	21
40.	1.488	Not selected	×
41.	2.078	Selected	22
42.	3.266	Selected	23

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43.	5.699	Selected	24
44.	6.196	Selected	25
45.	4.670	Selected	26
46.	4.751	Selected	27
47.	1.477	Not selected	×
48.	1.391	Not selected	×
49.	4.988	Selected	28
50.	5.783	Selected	29
51.	5.582	Selected	30
52.	1.711	Not selected	×
53.	1.245	Not selected	×
54.	1.405	Not selected	×
55.	4.865	Selected	31
56.	6.683	Selected	32
57.	5.106	Selected	33
58.	1.653	Not selected	×
59.	1.644	Not selected	×
60.	6.694	Selected	34
61.	1.082	Not selected	×
62.	1.745	Not selected	×
63.	1.485	Not selected	×
64.	3.518	Selected	35
65.	1.108	Not selected	×
66.	1.500	Not selected	×
67.	0.675	Selected	×
68.	1.307	Not selected	×
69.	5.542	Selected	36
70.	6.361	Selected	37
71.	5.260	Selected	38
72.	5.811	Selected	39
73.	4.537	Selected	40
74.	1.711	Not selected	×
75.	6.202	Selected	41
76.	7.470	Selected	42
77.	5.970	Selected	43
78.	6.439	Selected	44
79.	5.582	Selected	45
80.	7.107	Selected	46
81.	1.643	Not selected	×
82.	1.537	Not selected	×
83.	6.908	Selected	47
84.	6.876	Selected	48
85.	1.537	Not selected	×
86.	1.605	Not selected	×
87.	1.503	Not selected	×
88.	1.143	Not selected	×
89.	6.317	Selected	49

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90.	1.744	Not selected	×
91.	1.494	Not selected	×
92.	1.701	Not selected	×
93.	**7.091**	**Selected**	50
94.	**5.258**	**Selected**	51
95.	**6.049**	**Selected**	52
96.	**6.506**	**Selected**	53
97.	1.562	Not selected	×
98.	1.561	Not selected	×
99.	**6.350**	**Selected**	54

RELIABILITY AND VALIDITY

The teacher effectiveness scale was distributed among 100 respondents randomly. The obtained information was scored and statistically treated to find out reliability and validity in order to standardize the scale. A correlation was worked out between the odd and even items for each scale. This was subjected to Spearman Brown's prophecy formula for the purpose of finding correlation coefficient for the entire scale. This gave the reliability coefficient for teacher effectiveness scale. Further the validity coefficient was also worked out from the reliability coefficient. Both the reliability and validity coefficient were subjected to 't' test separately. Its level of significance was fixed by the formula suggested by Edwards (1969):

$$t = \frac{r \sqrt{(n-2)}}{(1-r^2)}$$

RELIABILITY OF MEASURING TOOL

Reliability practically refers to the accuracy of the measurement or it means the consistency with which a test measures whatever it measures. Reliability Coefficient, test of Significance and Level of Significance for Teacher Effectiveness scale used in the study is

Table-02

S.No	Research Tool	Reliability correlation co-efficient ®	t-value (n=100)	LS
1	Teacher effectiveness	0.74	11.19	0.001*

*Significant at 0.001 %level   **LS- Level of significant**

The above table shows the reliability co-efficient test of significance and level of significance for one test used in this study. It is found that the obtained r-value and t-value for the present research tool is highly significant at 0.001 level. Therefore the tool is reliable for the present study.

VALIDITY OF MEASURING TOOL

Validity is the extent to which a test measures what it purports to measure. Validity, Test of Significance and Level of Significance of teacher effectiveness scale used in the study**.**

Table-03

S.No	Research Tool	Validity	t-Value	LS
1	Teacher Effectiveness	0.86	17.1	0.001*

*Significance at 0.001% level.   **LS- Level of significant**

The above table exhibits the validity test of significance and level of significance for one test used in the study. Based on the obtained result it is inferred that the validity and t-value for the tool is highly significant at 0.001 level. Therefore it is concluded that the selected tool is valid.

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PERCENTILE NORMS OF THE TOOL

Based on the normal probability theory the scoring procedure has been developed and is given in the following table-04

Table -04 Scoring procedure

S.No	Scores	Levels
1	Above 215	High
2	Between 185 to 214	Average
3	Below 185	Low

Mean score = 215.67   Standard deviation=30.3

The Z-score and T-score of the Teacher Effectiveness Scale

Table-05

Raw score	Z-Score	T-Score
148	-2.23259	27.6741
161	-1.8037	31.96305
163	-1.73771	32.6229
165	-1.67173	33.28274
167	-1.60574	33.94259
168	-1.57275	34.27252
172	-1.44078	35.59221
173	-1.40779	35.92214
174	-1.37479	36.25206
176	-1.30881	36.91191
177	-1.27582	37.24183
178	-1.24282	37.57176
179	-1.20983	37.90168
180	-1.17684	38.23161
181	-1.14385	38.56153
182	-1.11085	38.89145
183	-1.07786	39.22138
184	-1.04487	39.5513
187	-0.94589	40.54108
198	-0.58298	44.17024
199	-0.54998	44.50016
200	-0.51699	44.83009
202	-0.45101	45.48994
203	-0.41801	45.81986
187	-0.94589	40.54108
198	-0.58298	44.17024
199	-0.54998	44.50016
200	-0.51699	44.83009
204	-0.38502	46.14979

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207	-0.28604	47.13956
209	-0.22006	47.79941
211	-0.15407	48.45925
213	-0.08809	49.1191
214	-0.0551	49.44903
215	-0.0221	49.77895
216	0.010887	50.10887
217	0.04388	50.4388
219	0.109865	51.09865
222	0.208842	52.08842
223	0.241834	52.41834
224	0.274827	52.74827
225	0.307819	53.07819
226	0.340812	53.40812
227	0.373804	53.73804
228	0.406796	54.06796
229	0.439789	54.39789
230	0.472781	54.72781
231	0.505774	55.05774
232	0.538766	55.38766
233	0.571758	55.71758
234	0.604751	56.04751
235	0.637743	56.37743
236	0.670736	56.70736
237	0.703728	57.03728
238	0.736721	57.36721
239	0.769713	57.69713
240	0.802705	58.02705
241	0.835698	58.35698
243	0.901683	59.01683
244	0.934675	59.34675
245	0.967667	59.67667
246	1.00066	60.0066
247	1.033652	60.33652
248	1.066645	60.66645
250	1.132629	61.32629
255	1.297592	62.97592
256	1.330584	63.30584
261	1.495546	64.95546
262	1.528538	65.28538
263	1.561531	65.61531
265	1.627516	66.27516

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CONCLUSION

The tool will be very much useful to measure the teacher effectiveness of teachers.   Effective teachers have a direct influence in enhancing student learning and transforming the society. Teachers can either make or destroy the society. There is no doubt that Students taught by an effective teacher just for one year will remain ahead of her/his peers for at least the next few years. But unfortunately, if the students did not have an effective teacher, the negative effect on their achievements may not be fully remediated for up to two or three years. Future of the child and the mankind wholly depends upon the teacher. Under such circumstances this tool will be immense use for the researcher who would like to measure the teacher effectiveness of teachers teaching in schools.

REFERENCES

1. Best, J. and Kahn, J. Research in Education (9 ed), New Delhi: Prentice Hall of India Pvt. Ltd. 2006.
2. Charis, K. (1989): "Effective Teaching in School", London Prentice Hall, Inc.
3. Darling-Hammond,-L. (2010).Evaluating teacher effectiveness. How teacher performance assessments can measure and improve teaching. Centre for American progress.
4. Edwards, L. Allen (1957, 1969 Ed.). Techniques of Attitude Scale Construction. Bombay. India. Vakils,Feffer & Simons Pvt. Ltd.
5. Gupta, S.P. (1991): "Statistical Methods", New Delhi: Sulta Chand & Sons
6. Henery, E. Garreet, Statistics in psychology and education, New Delhi; paragon International publishers, 2009

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