

A Study of Classroom Behaviour of Prospective Teachers in Relation to Their Teaching Aptitude

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ABSTRACT

The present study examined the effect of teaching skills on classroom behaviour of prospective teachers in relation to their teaching aptitude. Two hundred prospective teachers were taken from two B.Ed colleges from Mohali district which were equally divided into experimental and control groups. Teacher Aptitude test was administered on both the groups to find out the relationship between classroom behaviour and teaching aptitude. The experimental group was exposed to treatment of teaching skills whereas control group received only theoretical explanation of micro teaching. Classroom behaviour of all the prospective teachers was observed before and after the treatment through- Flanders Interaction Analysis technique. Correlation and ANOVA were used to analyse the data. Results showed that there was no significant correlation between classroom behaviour and teaching aptitude of experimental and control groups prior to intervention. The study further revealed that all the groups (high and low teaching aptitude of experimental and control groups) showed significant differences in their mean scores after the treatment.

Introduction

It is an accepted fact that education brings about the desired changes in the social and cultural life of a nation. The teacher plays a pivotal role in any system of education. The preparation of such an important functionary must conceivably get the highest priority. Teaching is, no doubt, a challenging profession and only those teachers can shoulder the responsibility of nation building, who are adequately prepared and have sound professional knowledge and aptitude. This requires development of adequate

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skills, dedication to teaching and a determination for continuous growth and learning among the teachers (Hussain, 2004).

Since independence, a large number of teacher training institutions and colleges of education were established with a view to produce effective teachers. However, in reality, they have failed to do so because of the faulty admission criteria and defective teaching strategies and devices used in these colleges (Dutt & Nanda, 2008). The success of teacher education programme depends on developing skills to identify and nurture diverse teaching objectives, attitude, teaching aptitude and patterns of teaching behaviour among the student teachers, who have been preparing to enter into the teaching profession. The success also depends on enabling the student teachers to perform certain teaching behaviour patterns, string them together into strategies of classroom instruction and compare among different patterns of their own teaching behaviours and strategies in terms of their consequences.

Teacher behaviour broadly refers to how a teacher behaves with the students in the classroom, outside the classroom, inside and outside the school/college campus. Different teachers behave differently in one or the same situation. Teacher behaviour in the classroom determines how she/he acts or reacts in different classroom situations. Her/his behaviour is the reflection of her/his many qualities, which are also modified with passage of time as she starts gaining experience. Her entry behaviour when she starts pre-service training is different and then it gets modified with time (Reddy, 2007). The educationist and psychologists have made it clear that the teaching process can be improved only when teacher education institutions would prepare effective teachers who are not born but can be prepared by the use of feedback devices. Ryan's theory of teacher behaviour says that teacher's behaviour can be modified by feedback and micro-teaching is one of the important feedback devices to modify the teacher trainee's behaviour. It is a training device which is used at various pre-service and in service stages in the professional development of teachers (Dutt & Nanda, 2008).

As every action of the teacher in the classroom has its influence upon the learner, whether it is verbal or nonverbal, teacher-pupil interaction in the classroom assumes significance. All actions of the teacher are observed and are modelled by the students. Analysis of classroom interaction is one of the most important

innovations of teaching behaviour. During pre-service training, the teacher's behaviour can be modified through classroom interaction techniques.

In the teaching-learning process, the teacher needs to possess three qualities: knowledge, the ability to pass it on to others (communication), and aptitude (Iyer, 2002). Aptitude refers to the quality of being fit for a purpose or position. Teacher aptitude is the quality of being fit for teaching profession. Hence, it is considered as the determinant factor of effective teaching. If the teachers are empowered with necessary skills and competencies, they can inculcate those skills in pupils (Dutt & Rao, 2001). Research indicates that everyone does not have the ability or the aptitude to take up teaching. Certain minimum requirements in terms of intelligence, temperament, and personality are observed to be highly critical. He who ceases to learn cannot adequately teach. Therefore, teachers, like other professionals, need good training. They cannot be expected to solve problems of student motivation by themselves. Training demands an awareness of teaching skills on behalf of every teacher called the knowledge of her teaching aptitude.

Various studies have been conducted to find out the effect of classroom verbal behaviour of teachers in respect of variables such as age, sex, personality, attitude towards teaching and training, experience, values, socioeconomic status and modernity etc. However, only a few studies have been conducted relating to classroom behaviour and teaching aptitude. Ifaera (1988) explored the relationship between factors of teaching aptitude and teacher classroom behaviour components (such as teacher talk ratio, pupil talk ratio and silence or confusion ratio) and found that the teacher talk ratio was significantly correlated with three of the teaching aptitude factors as well as the total teaching aptitude score. She also reported significant negative correlation between silence or confusion ratio with the three aptitude factors and the total aptitude score and positive significant correlation between teaching aptitude score and content cross ratio. The high-aptitude group and the low-aptitude group differed significantly with the high aptitude group showing high teacher talk, teacher response and content emphasis.

Objectives of the Study

The objectives of the study included the followings.

1. To study the teaching aptitude of prospective teachers.

2. To study the relationship between classroom behaviour and teaching aptitude of prospective teachers.
3. To study the effect of teaching skills on classroom behaviour (namely, teacher talk ratio, indirect teacher talk ratio, direct teacher talk ratio, pupil talk ratio and silence or confusion ratio) of prospective teachers' teaching aptitude.

Hypotheses

The following hypotheses were formulated in the study.

1. There exists no significant correlation between classroom behaviour (dimensions viz., teacher talk ratio, indirect teacher talk ratio, direct teacher talk ratio, pupil talk ratio and silence or confusion ratio) and teaching aptitude of prospective teachers.
2. There exist no significant difference between the pre-test post-test scores of classroom behaviour (dimensions viz., teacher talk ratio, indirect teacher talk ratio, direct teacher talk ratio, pupil talk ratio and silence or confusion ratio) of prospective secondary school teachers' teaching aptitude of all the groups of experimental and control group.
3. There exists no significant difference between the gain scores of classroom behaviour (dimensions viz., teacher talk ratio, indirect teacher talk ratio, direct teacher talk ratio, pupil talk ratio and silence or confusion ratio) of prospective teachers' teaching aptitude of all the groups of experimental and control group.

Statement of the Problem

The efficacy of teacher training programmes has been questioned by researchers, practitioners, and policy makers. The investigator during her tenure in a teacher training institute observed that the practical training provided to the student teachers in micro and mega teaching was not sufficient to become an effective and confident teacher. At present, in teacher training institutions, the student teachers are trained through traditional approach of teaching and the evaluation of the extent to which the trainee acquires a skill in particular and general teaching competence is vague and unscientific. There is a provision of providing practice in micro and mega teaching but no linkage between these two practices is there. They are provided training as a separate micro lessons and mega lessons. Even between these two practices very less importance is given to micro teaching. They just prepare

the micro lessons as per prescribed syllabus or minimal practice is provided to complete the formality. They complete the whole micro skills practice in 3-4 days with no consideration to develop effective teaching. This results in lack of confidence in facing the whole class for full time of 35-40 minutes and many are unable to adjust to the stipulated classroom environment and sometimes even fail in their profession. Many of them are afraid to face the class again. Mere insight and knowledge of teaching skill do not automatically guarantee its mastery. It is precisely microteaching that serves practising and mastering teaching skills and the ideal way to master teaching skills is to execute it in practice in natural settings.

Method

The Sample

The sample for this study consisted of two hundred prospective teachers. They were drawn from two B.Ed training colleges of Mohali district (Punjab) which were selected by purposive sampling method. The sample was divided into experimental and control groups, each having 100 prospective teachers. It was ensured that sample came from the same social and academic background, and got admission on merit basis. Both the colleges were affiliated to the same university, had same syllabi and were recognised by NCTE and were approximately ten kilometres apart from each-other.

Tools Used

The following tools were used in the present study:

- Teaching aptitude test battery by Psy-Com Services (1996).
- Flanders Interaction analysis observation sheet developed by Flanders (1970) was used to encode the classroom behaviour of all prospective teachers, before and after the treatment.
- Flanders Interaction analysis decoding 10×10 matrix sheet developed by Flanders (1970) was used to decode the classroom behaviour of all prospective teachers.

Design of the Study

The study employed pre-post experimental design. The Teaching Aptitude Scale was administered on experimental and control groups and later the sample was divided into high teaching aptitude and low teaching aptitude taking the highest and lowest

27 per cent samples each from both the groups as per the Kelly criterion. Thus, the experimental and control group each contained high and low teaching aptitude respondents.

In the pre-test stage classroom observations were coded on 10×10 matrix response sheets by using Flanders Interaction Analysis Categories for all prospective teachers during the first teaching practice and then decoding was done on the basis of classroom observations through the technique of Flanders Interaction Analysis for each of Experimental and Control group. Interpretation and Analysis was done by calculating the classroom behaviour of prospective teachers in terms of Teachers Talk Ratio, Indirect teacher talk ratio, direct teacher talk ratio, Pupils Talk Ratio and Silence/Confusion ratio. Then sufficient training in two micro skills i.e. Skill of Probing Questions and Skill of Explanation was provided to all the prospective teachers of experimental group only. No such treatment or training was given to the Control group. After the completion of training session of micro skills, Classroom Observations were again encoded and further decoded by 10×10 interaction matrix table during Second Teaching Practice Session by using the same technique of Flanders interaction analysis. Data were analysed with the help of correlation

Results and Discussion

Table 1 shows correlation between classroom behaviour (teacher talk ratio, indirect teacher talk ratio, direct teacher talk ratio, pupil talk ratio and silence or confusion ratio) and teaching aptitude of prospective teachers. It is evident from Table 1 that none of the values of correlation is significant. Hence, Hypothesis 1 that there exists no significant correlation between classroom behaviour and teaching aptitude of prospective secondary school teachers is retained. By observing the results, it can be said that classroom behaviour is not related to teaching aptitude and a person can be trained as a teacher irrespective of his teaching aptitude.

Table 1
Correlation between Classroom Behaviour and Teaching Aptitude

Classroom behaviour dimensions	Total Teaching Aptitude (Experimental Group)		Total Teaching Aptitude (Control Group)	
	Pearson Correlation	Sig. (2-Tailed)	Pearson Correlation	Sig. (2-Tailed)
Teacher Talk Ratio	-.051	.616	.063	.531
Indirect Teacher Talk Ratio	.030	.764	.069	.498
Direct Teacher Talk Ratio	-.082	.418	.012	.907
Pupil Talk Ratio	-.049	.626	-.096	.340
Silence Or Confusion Ratio	.090	.373	.025	.802

Table Value at 0.05 – 0.091 for df (N-2) =98

Table Value at 0.01 – 0.118 for df (N-2) =98

A one-way ANOVA was conducted to compare the effect of treatment of teaching skills on classroom behaviour of prospective secondary school teachers for teaching aptitude. Table 2 contains the results.

Table 2
ANOVA for all Groups of Teaching Aptitude

Dimension	Sources of variation	PRE TEST				POST TEST			
		Sum of Squares	Mean Square	F	Sig.	Sum of Squares	Mean Square	F	Sig.
TTR (Teacher Talk Ratio)	Between Groups	145.88	48.63	0.187	0.905	1559.29	519.76	0.96	0.413
	Within Groups	26980.4	259.43			56047.6	538.92		
	Total	27126.3				57606.9			
PTR (Pupil Talk Ratio)	Between Groups	1515.63	505.21	2.302	0.081	9442.47	3147.49	7.95	0
	Within Groups	22824.4	219.47			41165.2	395.82		
	Total	24340.1				50607.7			
SIL/CON (Silence/ Confusion)	Between Groups	1450.41	483.47	1.1	0.353	29075	9691.67	29.2	0
	Within Groups	45696.4	439.39			34492.7	331.66		
	Total	47146.9				63567.7			

ITTR (Indirect Teacher Talk Ratio)	Between Groups	1164.32	388.11	2.153	0.098	10098	3366	16.5	0
	Within Groups	18743.9	180.23			21258.1	204.41		
	Total	19908.3				31356.1			
DTTR (Direct Teacher Talk Ratio)	Between Groups	824.778	274.93	0.789	0.503	2731.21	910.40	3.29	0.024
	Within Groups	36236.2	348.43			28764.7	276.58		
	Total	37061				31495.9			

Table 2 shows the output of classroom behaviour of prospective secondary school teachers (w.r.t dimensions namely teacher talk ratio, indirect teacher talk ratio, direct teacher talk ratio, pupil talk ratio and silence or confusion ratio) of all the groups of teaching aptitude of experimental and control groups before and after the treatment. It is observed that the F value of all the dimensions of classroom behaviour before treatment is less than the critical value and p value is more than 0.05. This shows that there is no significance difference between the mean scores of all the groups (High and low teaching aptitude) of experiment and control groups. This analysis showed that all the groups were equivalent in their teaching aptitude before the treatment. There was homogeneity in their performance prior to the treatment.

On the other hand, F values of all the dimensions of classroom behaviour after treatment is more than the critical value (2.69) and p value is less than 0.05. It is .964 ($p=.413$) for teacher talk ratio, 7.952 (.00) for pupil talk ratio, 29.22 (.00) for silence or confusion, 16.467 ($p= .00$) for indirect teacher talk ratio and 3.292 ($p=.024$) for direct teacher talk ratio. This results show that all the groups (High and low teaching aptitude) differed significantly showing the effect of treatment on their classroom behaviour.

Table 3 shows the results of the ANOVA computed to find out the significance of difference between the gain scores of classroom behaviour (w.r.t dimensions namely teacher talk ratio, indirect teacher talk ratio, direct teacher talk ratio, pupil talk ratio and silence or confusion ratio) of prospective secondary school teachers' teaching aptitude of all the groups (High and low teaching aptitude) of experimental and control group ($N= 108$. $df =3,104$).

Table 3
ANOVA of Gain Scores for all Groups having Teaching Aptitude

Dimension	Sources of variation	Sum of Squares	Mean Square	F	Sig.
TTR gain (Teacher Talk Ratio)	Between Groups	1862	620.667	0.802	0.496
	Within Groups	80484.7	773.891		
	Total	82346.7			
PTR gain (Pupil Talk Ratio)	Between Groups	5417.21	1805.74	3.16	0.028
	Within Groups	59421	571.356		
	Total	64838.3			
ITTR gain (Indirect Teacher Talk Ratio)	Between Groups	16458.5	5486.16	16.423	0
	Within Groups	34741.2	334.05		
	Total	51199.7			
DTTR gain Direct Teacher Talk Ratio)	Between Groups	5494.77	1831.59	3.27	0.024
	Within Groups	58245.8	560.056		
	Total	63740.5			
SIL/CON gain (Silence/ Confusion)	Between Groups	22341.4	7447.14	10.732	0
	Within Groups	72168.2	693.925		
	Total	94509.6			

It is observed (Table 3) that the F value of all the dimensions of classroom behaviour before treatment is more than the critical value and p value is less than 0.05. It is .802 ($p=.490$) for teacher talk ratio, 3.16 (.028) for pupil talk ratio, 10.732 (.00) for silence or confusion, 16.423 ($p= .00$) for indirect teacher talk ratio and 3.27 ($p=.024$) for direct teacher talk ratio.

Although the total teacher talk ratio is insignificant but its two dimensions i.e. indirect teacher talk ratio, direct teacher talk ratio are highly significant which illustrated the efficacy of treatment of teaching skills on their classroom behaviour because indirect teacher talk ratio improved much more than direct teacher talk ratio showing the improvement of democratic attitude towards students and decrease of teacher dominancy in classroom. Hence, the hypothesis that there exist no significant difference between the gain scores of classroom behaviour (w.r.t dimensions namely teacher talk ratio, indirect teacher talk ratio, direct teacher talk ratio, pupil talk ratio and silence or confusion ratio) of prospective

secondary school teachers' teaching aptitude of all the groups (High and low teaching aptitude) of experimental and control group is rejected and one can say that all the groups differed significantly after the treatment.

Conclusion

No significant correlation was found between classroom behaviour (w.r.t dimensions namely teacher talk ratio, indirect teacher talk ratio, direct teacher talk ratio, pupil talk ratio and silence or confusion ratio) and teaching aptitude of prospective teachers which indicates that classroom behaviour is not significantly dependent on teaching aptitude. It might also suggest that irrespective of teaching aptitude, a person can be trained to be a good teacher. There was significant difference between classroom behaviour (w.r.t dimensions namely teacher talk ratio, indirect teacher talk ratio, direct teacher talk ratio, pupil talk ratio and silence or confusion ratio) of prospective teachers' teaching aptitude of all the groups of experimental and control group indicating all the groups differed significantly after the treatment.

Delimitations of the Study

The present study had the following delimitations.

- Only two hundred prospective secondary schools teachers were selected for the present study.
- Only two Colleges of Education (B.Ed) in District Mohali were selected for the study.

The scope of present study was delimited in respect of sample used, the variables, tools employed to measure the variables and statistical techniques for analysis. The area of study was restricted to District Mohali of Punjab only.

REFERENCES

- DUTT, N. K. AND S.K. NANDA. 2008. *Microteaching Educational Technology*. Doaba Book House, New Delhi.
- DUTT, B.S.V. AND B.R. DIGUMARTI. 2001. *Empowering Primary Teachers*. Discovery Publishing House, New Delhi.
- FLANDERS, N. 1970. *Analysing Teacher Behaviour*. Addison-Wesley, New York.

- HUSSAIN, S. 2004. *Effectiveness of Teacher Training in Developing Professional Attitude of Prospective Secondary School Teachers*. Thesis, University of Arid Agriculture/University Institute of Education and Research. Pakistan Research Repository. www.eprints.hec.gov.pk/483/1/240.html.htm
- IFAERA, S. 1988. *A Study of the Relationship between Teacher Behaviour and Teaching Aptitude of Teacher Trainees*. M.Phil, Edu., Avinashilingam Institute for Home Science and Higher Education. pp. 1455-56. Fifth Survey of Educational Research (1988-92).
- IYER, M. V. 2002. Making of a Good Teacher. *The Hindu*. Online Edition of India's National Newspaper (2000, September 03). <http://www.thehindu.com/thehindu/edu/2002/09/03/stories/2002090300010200.htm>
- M'S PSY-COM SERVICES. 1996. *Manual for Teaching Aptitude Scale Designed and Developed by M's PSY-COM SERVICES*. New Delhi.
- REDDY, B. R. 2007. *Teaching Behaviour of High School Teachers*. Discovery Publishing House, New Delhi.