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Paper-1
Teaching and Learning of Geography in Secondary Schools of Burdwan District of West Bengal: An In-Depth Analysis
Mr. Biswajit Saha
Teaching and Learning of Geography in Secondary Schools of Burdwan District of West Bengal: An In-Depth Analysis

Mr. Biswajit Saha

Abstract

This current study attempts to identify the present scenario of teaching-learning process of Geography in Secondary schools of Burdwan district, West Bengal. The paper had three main objectives which are: 1) to study the status of teaching and learning of Geography in terms of: a. Weightage to Geography teaching in time table, b. Performance of the students in Geography during last three academic sessions, c. Training of Geography teachers and d. Availability of minimum essential learning resources in the school system. 2) To study the practices of teaching and learning of Geography in terms of: a. Transactional methods followed, b. Resources used and Assessment practices. 3) To study the problems of teaching and learning of Geography from the perspectives of students, teachers and Head teachers. The researcher utilized random sampling technique to collect data from 20 Geography teachers, 10 Head teachers and 40 students of class IX and X from ten secondary schools of two separate blocks (Aushgram-I and Aushgram-II) in Burdwan district, West Bengal. Teachers of these schools were provided a questionnaire, interview schedule for the Head teachers and focus group discussion for the students. Study was based on descriptive method; both qualitative and quantitative data analysis technique was used.

Key Words: Teaching, Learning, Geography, Secondary Schools.

Introduction -
Geography is a compulsory school subject in India. When did the self-motivated or self-conscious study of human environment started in India is difficult to say with authenticity. Geographical knowledge existed in pre-British India. But formal education of Geography, as a course of study, took shape in the early part of the twentieth century under the British tutelage. First steps in this direction, however, were already taken in the nineteenth century. Since the latter half of the nineteenth century, Geography became a regular part of the elementary school curriculum in Britain and came in the purview of the secondary schools in 1902. In India, the British Introduced Geography in schools along with arithmetic and English. This initiative became more serious with the establishment of the first Geography department in the Punjab University in 1928. At present Geography is one of the important subject in school Curriculum. Geography derives a lot of material from such subjects as Biology, Anthropology, Sociology, Economics, Mathematics, Chemistry and other Sciences. Geography as a discipline enables us to understand the earth we are living in from a spatial perspective. It offers a systematic framework for enquiry into questions about the world that surrounds us. Geography provides a bridge between the Social Sciences and the Physical Sciences, through the provision of an understanding of the dynamics of cultures, societies and economies on the one hand, and those of physical landscapes and environmental processes on the other. The Geography and its teaching learning have always leaded to great discussion. A large number of students are not interested of real curious to study Geography. Sometimes, learning of Geography has become hectic task for these i.e. it leads to develop an ignorance and avoidance in Geography. Geography should be taught in schools and colleges by trained specialist teachers. Teachers are the most valuable resource in Education. Because of this and because of the complexity of Geography studies, well trained, specialist’s teachers are essential. (Haubrich, 1992, p.13). The
importance of Geography can be understood more clearly by considering the effect of Geography teaching as many as a human being, as an administrator as a politician etc. teaching of every subject needs its innovative style to cater knowledge. Similarly, teaching and learning of Geography also needs enough weightage to smell its own fragrance. In the West Bengal perspective, its need to take special care about Geography to know its present status. Realizing the importance of Geography and the relevance of its inclusion in school curriculum as a major subject of social studies, the investigator studied the teaching and learning of Geography in secondary schools of Burdwan district of West Bengal. The aim of this investigation to study the present teaching learning processes and associated problems in secondary schools of Burdwan district.

Rationale-
Geography is one of the important school subject in India. The importance of Geography has got emphasized by Education Commission (1964-66), National Policy on Education (1986) and National Curriculum Framework (2005). In this context, that UNESCO, 2014, (p. 19) questions the quality of education in schools of India. The report places India among the 21 countries facing an extensive learning crisis. The report reveals that less than half of the population of children learns the Geography, he/she finds it difficult to teach the subject, and skips over the Geography portion of the syllabus. Improvement in the quality, efficiency, and equity of education, to a considerable extent, depends on the nexus of teaching and learning, which is, in turn, influenced by the quality of teachers (PANDEY, 2006, p. 319). The Secondary Education Commission, also known as the Kothari Commission, (1966, p. 125) has also identified the teacher as the single most important factor influencing the quality of education. According to the Commission, the most important qualities of a teacher are his personal qualities, his educational qualifications, his professional training, his
experience and the place he occupies in the school as well as in the community.

Many studies have been conducted on the present position of teaching and learning of Geography in secondary schools in different states which shows poor status of teaching and learning of Geography at Secondary stage. Studies by Patil (1985) and Jain (1987) show that the status of teaching and learning of Geography is very poor in Maharashtra and Gujarat respectively. Similarly, studies by Raina (1990) show the poor status of social science teaching at the secondary stage. Studies conducted by Maikhuri (2005) and Bairagya (2005) stress upon innovative methods of teaching Geography for improving the quality. After getting an overall scenario of Geography teaching and learning of India, now if we look upon the teaching and learning of Geography in Burdwan district of West Bengal, we can see the critical conditions are there. In West Bengal Geography is considered as an important school subjects in both elementary and secondary levels. But we can’t say that the status is very good. Lots of lacunas are there such as, unqualified teachers who are teaching Geography, lack of proper teaching staff, poor infrastructure, failures of West Bengal Government to implement the policies framed by MHRD and several apex educational bodies and poor availability of learning resources are there at secondary stage. These all are positively catch the attraction of researchers.

**Statement of the Problem**

“Teaching and learning of Geography in Secondary Schools of Burdwan District of West Bengal: An In-depth Analysis.”

**Objectives of the Study**

The research had the following objectives:

1. To study the status of teaching and learning of Geography in terms of:
   
i. Weightage to Geography teaching in time table.

   ii. Performance of the students in Geography during last three academic sessions.
iii. Training of Geography teachers.
iv. Availability of minimum essential learning resources in the school system.

2. To study the practices of teaching and learning of Geography in terms of:
   i. Transactional methods followed.
   ii. Resources used.
   iii. Assessment practices.

3. To study the problems of teaching and learning of Geography from the perspectives of students, teachers and Head teachers.

**Research Questions**

1. How much weightage given to Geography in school time table?
2. What is the level of performance of secondary students during the last two academic sessions?
3. How are the transactional strategies and learning resources used in teaching and learning of Geography at secondary stage?
4. How is assessment practiced in teaching and learning of Geography at secondary stage?
5. What are the problems of teaching and learning of Geography faced by the Students, Geography Teachers and Head teachers?

**Method and Procedure**

I. **Method:** For the present study, the investigator was adopted the Descriptive method.

II. **Population:** The population of the study were Government Secondary schools (Bengali Medium) of West Bengal.

III. **Sample:** Out of the total number of the secondary schools (8588) of West Bengal, Burdwan District has 736 secondary schools. On the other hand, total 31 Blocks are there in Burdwan district. For this study, the investigator selected two Blocks of Burdwan district randomly. From those two Blocks the
investigator selected 10 government-aided schools (five schools from each Block) randomly also. From these schools 10 Head teachers 20 respective Geography subject teachers and 40 students (including Boys and Girls) selected randomly. Thus, total participants are as follows – i. 20 Geography teachers. ii. 10 Head teachers. iii. 40 students of class IX and X.

**IV. Tools:** After choosing the samples the investigator was developed tools for the investigation such as-

i. Observation schedule for Geography classroom transaction.

ii. Questionnaire for teachers.

iii. Interview schedule for Head teacher.

iv. FGD for students.

**Statistical Technique-**

As the present study was based on Descriptive type method, Qualitative and Quantitative data analysis technique was used. Qualitative data analysis means studying the organized materials in order to explore inherent facts. These data are studied from as many angles as possible either to explore the new facts or to re-interpret already known facts. On the other hand, Quantitative data are measures of values or counts and are expressed as numbers. Quantitative data are data about numeric variables (e.g. how many; how much; or how often). The researcher will collect the data by keeping the research objectives in mind. All data will be collected through questionnaire, observation, interview schedule and focus group discussion and all will be analyzed and interpreted by using frequencies and percentage.

**Delimitations of the Study-**

This study is limited to the followings-

a) The study was limited to only Bengali Medium Government Secondary schools of West Bengal.

**Major Findings-**
Number of allotted classes of Geography in each school varies from one to another. But proper weightage of Geography teaching in the school timetable is giving. Out of the total classes of Geography in a week, class IX is getting (48.63%) classes in a week and on the other hand class X is getting (51.34%) classes per week.

Performances of students in Geography during last two academic sessions which varies school wise.

Maximum concentration of marks of the student in both the academic session in 2015 (38%) and in 2016 (31.21%) is in between (60%-70%) and (70%-80%).

2016 recorded with high percentage (18.44%) of students scoring below 60% in Board examination than class IX (15.6%).

Every year less number of student are appearing for Board examination in comparison to class IX.

All the teachers teaching Geography are professionally trained.

All the institutions possessed Maps, Globes, Charts and Models. Maximum teachers prepared low cost teaching aids to teach Geography.

All Teachers follow a definite transactional method to teach Geography like Demonstration-cum-lecturing, collaborative leaning, peer learning, question answering and group learning.

Majority of the teachers using Demonstration-cum-lecturing, collaborative leaning, peer learning, question answering and group learning methods.

(60%) teachers are following group learning method to teach Geography.

(60%) Geography teachers are following lesson plan before going to the class and (40%) teachers are not following lesson plan.
➢ (90%) schools are following unit test to evaluate the students. Only one school is following both unit test and annual examination as evaluation process.

➢ (80%) teachers are taking regular Remedial classes.

➢ Giving of regular homework and checking is there by all teachers.

➢ The problems faced by the students include lack of educational trip, proper library, laboratory, Remedial classes, separate classes, TLMs and outside participation.

➢ The problems faced by the Geography teachers include educational trip, lack of proper library, laboratory, Remedial classes, separate classes and outside participation.

➢ The problems faced by the Head teachers include lack of receiving regular fund, library, field visit, outside participation and remedial classes.

➢ (90%) Head teachers of the schools supervised the regular teachers’ classes.

➢ Some schools are there where only one teacher is teaching all the classes (from Class V to Class X).

➢ No teachers haven’t participated any training programme.

**Educational Implications**

The major findings of the present study will help the educational planner, administrators, academic practitioner to take necessary measures for the improvement at different levels of Education.

 i. It will help to know in what way they are channelizing Geography teaching-learning process and to take up effective measures to improve teaching learning of Geography at secondary level.

 ii. It will help to trace out the academic progress of the students and where they need attention for betterment in geography at secondary level.
iii. It will help the School to give some exposure of the different training programmes to the Geography teachers for professional development.

iv. It will help the Geography teachers to take many innovative techniques of evaluation process of geography.

v. It will be helpful to take corrective steps for infrastructural development.

Suggestions for Further Research-
The following suggestions may be taken into consideration for further research-

i. Similar studies may be conducted in the other districts of west Bengal.

ii. Similar studies may be conducted in other state.

iii. Similar studies may be conducted in other Blocks of West Bengal.

iv. Similar studies may be conducted in other levels of Education.

v. Similar studies may be conducted by taking large sample.

vi. Similar studies may be conducted on uses of teaching learning resources to teach Geography.

vii. Comparative studies on status in different states may be undertaken.

Conclusion-
School Geography in India started within a traditional disciplinary approach. Its content had huge input from physical and regional Geography like elsewhere, especially in Europe. After the independence of the country, priorities were re-defined and education underwent changes in different time phases. But the approach of the 21 century marked some perceptible changes in Indian Education, both in the school and the Universities. One of these changes in school education was the integrated approach in Social Sciences till the secondary stage. The ideas behind had been, all pupils, when they leave schools, should have some knowledge about Geography, history and the functioning of the government of the country they belong to. Keeping the grass root level
situation in view, where at times, there is only one teacher to teach all social science subjects, the syllabus was designed in consultation with experts from all the areas, in workshop mode. Care was taken so that it can be taught by a teacher without much problem of incomprehension. Thematic integration was tried, in which Geography was treated as a theme of study within the social science syllabus. The revision which followed the 2000 National Curriculum in 2006, kept Geography as an integral component of social science. According to the new curriculum, “Geography will be introduced (in upper primary stage) to promote the understanding of interdependence of various regions and countries. The child will be introduced to the contemporary issues such as economic resources, gender, marginalized groups, environment and the on-going process of globalization”. The major themes and most of the content remained the same as that of 2000 with a few additional case studies. The new syllabus aimed also towards the reduction of the curriculum load and the load of the school bags. But it will take some years to understand the effect of the changes in the curriculum on the teaching and learning community. It can only be hoped that Geography will be a better understood and interesting school subject in the years to come.

References-

Paper-2
Effect of Feedback on Accuracy of Self-assessment of Achievement in Chemistry in the Context of Self Concept and Bias of Eleventh Graders

Dr. Poonam Tyagi
Prof. H. R. Pal
Effect of Feedback on Accuracy of Self-assessment of Achievement in Chemistry in the Context of Self-concept and Bias of Eleventh Graders

Dr. Poonam Tyagi
Prof. H. R. Pal

Abstract

Results of inaccurate self-assessment by candidates in today’s competitive world are frequently disastrous for them. Self-assessment does not always happen totally in isolation. It is partly influenced by the feedback the aspirants receive from their peers or external experts in the form of teachers, parents and tutors at home/ school/ coaching centres. Accuracy of self-assessment varies from student to student, presumably because of differences in personality characteristics. It is interesting to understand the dynamics of this influence through research. The present study is precisely an attempt in this direction.

Key words: Accuracy of Self-Assessment, Bias in Self-Assessment, Self-concept

The context of the Study: Self-Assessment-

Boud (1995) defines Self-Assessment as “The involvement of students in identifying standards and/or criteria to apply to their work and making judgments about the extent to which they have met these criteria and students.” For Boud, Self-Assessment involves two clear stages: The identification (and learner understanding) of standards and criteria and making of one’s own judgments against these criteria.

This two-part process necessarily involves students reflecting on their own learning. Self-Assessment is used as both a process as well as an activity. It is a

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practice in which to engage as well as a goal to which to aspire. It is important to make a distinction because Self-Assessment is a goal of higher education which may be pursued through course design which does not involve Self-Assessment exercises as such.

Types of Self-Assessment-
There can be two kinds of Self-Assessment, i.e., qualitative and quantitative. In case the test outcomes are in the form of grades, the Self-Assessment too, is in terms of grade estimations. Similarly, if the scoring of the test is done numerically, the students are asked to estimate their raw scores rather than grades. Self-Assessment is of three kinds in terms of the time of making Self-Assessment. Self-Assessment can be made before entering into the examination hall, immediately after handing over the answer sheet to the investigator and after a time interval allowing students to discuss the test among themselves or with the teacher.

Accuracy of Self-Assessment-
Accuracy of Self-Assessment can be studied in terms of quantum of deviation from teacher assessment. It refers to the extent to which estimated scores are close to the obtained scores on a test. The deviation of estimated score from the obtained scores in absolute terms (without direction) is taken to be the measure of accuracy.

Bias in Self-Assessment-
Bias refers to the direction of deviation of estimated scores from the actual scores. In case of estimated scores being less than the actual scores, there is negative bias or under assessment. If reverse is the case, it is positive bias or over assessment.

Rationale of the Study-
Review of literature reveals that most of the studies on Self-Assessment have been co-relational. For instance, relationship between Self-Assessment and other measures, peer and expert assessment had been studied by Indian Institute of Psychometry (1982), Kruger and Dunning (1999), Saddler and Good (2001) etc. In a Meta analysis Falchikov and Boud (1989) reported that expertise within a particular field influenced the Accuracy of Self-Assessment. It can be easily observed that Experimental studies exploring causal relationships are conspicuously absent. The effect of techniques of improving Self-Assessment has been studied by Jain (1971), Palmer et al. (1985), Fox and Dinur (1988), Shrauger and Osberg (1989), Clare and Mark (2002), Gupta (2003), and Rees and Shepherd (2005). They found that some Self-Assessment improvement techniques such as video tape replay, audio taped group discussion do not play an important role to enhance the Self-Assessment ability where as Self-Assessment training, instructional manipulation and meditation improve the Ability of Self-Assessment in students. Jain (2007) found that Accuracy of Self-Assessment of student-teachers improved with increased quantum of feedback. Boud and McDonald (2003) reported improvement in students’ performance after the teachers were trained in Self-Assessment. In view of effectiveness of some and the ineffectiveness of other techniques for improving Accuracy of Self-Assessment, further research in the area is utmost needed. Although there are studies on Self-Assessment in relation to the characteristics of the assessors- particularly their competence or achievement, majority of these are focused on the phenomenon of bias i.e. over and under estimation rather than the Accuracy. Studies related to student competence have been conducted by Balch (1992), Longhurst and Norton (1997), Dunning et al. (2003), Mettheos et al. (2004), Hartman (2001) etc. These studies indicated that less competent students grossly over-estimated themselves while more competent ones made
much realistic Self-Assessment. No study exploring the effect of other important cognitive and effective domain variables related to the students such as Self concept, Self confidence, Intelligence, Independence on the Accuracy of Self-Assessment was found to have been so far undertaken. Moreover, except for Indian Institute of Psychometry (1982), Jain (1971), Gupta (2003), Jain (2007) and Yadav (2008) all other studies have been conducted on foreign soil. Hence studies in Indian settings are needed.

**Objectives**

Following were the objectives of the study:

1. To study the effect of Treatment, Self-concept and their Interaction on Accuracy of Self-Assessment of Achievement in Chemistry by considering Self-confidence and Intelligence as covariates.
2. To study the independence of Treatment and Bias in Accuracy of Self-Assessment of Achievement in Chemistry.

**Hypotheses**

The hypotheses of the study were:

1. There will be no significant effect of Treatment, Self-concept and their Interaction on Accuracy of Self-Assessment of Achievement in Chemistry by considering Self-confidence and Intelligence as covariates.
2. Treatment and Bias in Accuracy of Self-Assessment of Achievement in Chemistry (Under/Over Assessment) will be independent of each other.

**Sample**

The present study was experimental in nature, which was conducted on Eleventh Grade students studying in senior secondary schools of Indore and Dewas city of Madhya Pradesh. To obtain the desired sample a renowned coaching institute of the town was selected. This coaching institute attracts students from a wide variety of CBSE and MP Board Schools of Indore.
Therefore one could get a fairly representative sample conveniently at one place.

**Treatment Wise distribution of Sample**-

<table>
<thead>
<tr>
<th>Treatment</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Teacher Feedback</td>
<td>28</td>
</tr>
<tr>
<td>Peer Feedback</td>
<td>38</td>
</tr>
<tr>
<td>No Feedback</td>
<td>58</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>124</strong></td>
</tr>
</tbody>
</table>

**Experimental Design**-

The present study was experimental in nature and designed as per the following lay out:

\[
\begin{array}{cc}
X_1 & O \\
\hline
X_2 & O \\
\hline
O
\end{array}
\]

Where X represents Treatment and O represents Observation. The dotted lines mean non-equivalence among groups.

As depicted above the sample of the study comprised of three groups of students of class XI. There were three kinds of Treatments namely Teacher Feedback, Peer Feedback and No Feedback. These Treatments were assigned randomly to the three selected groups. Thus there were two experimental groups, differing in terms of kind of treatment and one control group which was not offered any treatment.

**Tools**-

The variables assessed in this study were Accuracy in Self-Assessment of Achievement in Chemistry (ASAAC), Self Concept, Intelligence, and Self Confidence. Assessment of Achievement in Chemistry was done with the help
of three Achievement Tests in Chemistry developed by the Investigator. Self-Assessment of Achievement in Chemistry was done with the help of Response Analysis and Self-Assessment Performance developed by the Investigator. Self-concept was assessed with the help of appropriate standardized test given below.

**Self-Assessment of Achievement in Chemistry**-

In order to get Self-Assessment of Achievement in Chemistry a Response Analysis and Self-Assessment Performa was prepared for each of the three tests. It contained response error analysis to help students identify the mistakes they might have committed in responding to the questions. The Self-Assessment Performa also contained Q. No. and marks allotted to each questions. After analyzing their responses, students were supposed to predict their marks in each of the questions.

**Self-Concept**-

Self-concept is defined as an attitude towards one-self. It consists of perceptions, feelings, attitudes, aspirations and values of one-self concerning one-self. Self-concept is formed as a result of interactions with the environment. Self-concept was assessed with the help of Self-concept List of Pratibha Deo. The checklist has 90 adjectives which cover almost all the important aspect of personality. The words relate to the dimensions of intellect, emotions, character, sociability and asthetics of Self Concept. Each of the 90 adjectives is to be checked on 5 alternatives. The reliability coefficient obtained through Test Retest Method was in the range of 0.62 to 0.86 for different time intervals ranging from 15 days to 3 months.

**Self Confidence**-

Self-confidence can be defined as one’s faith in his or her own ability enabling the individual to function autonomously. Self-confidence was assessed with the help of Self-confidence scale developed by Bhawalkar, 1992. This scale
consists of 23 statements. Each statement is followed by three options. Each selected alternative had a scale value. This could differ from item to item. Item wise score values for alternatives is given below in the table.

The Test Retest Reliability reported by the Authors was 0.76. Also the Split-Half reliability coefficient was 0.84.

**Intelligence**

There are many standardized Intelligence tests for the 15-17 year age group. Out of these tests, some are verbal, others non-verbal. Some are in Hindi and others in English. The non-verbal standardized Intelligence tests for the specified group were Culture Fair Intelligence Test scale 3 by R.B. Cattel, Standard Progressive Matrices by J.C. Raven, J.H. Court and J. Raven. The standard progressive matrices Test was selected for assessing Intelligence in the study.

**Procedure of data Collection**

The present study was an attempt to find out the effect of different kind of Feedback on Accuracy of Self-Assessment of Achievement in Chemistry (ASAAC).

The subjects were first of all oriented towards the purpose and broad procedure of the experiment. In the first week of the experiment, the investigator administered Achievement Test in Chemistry I and got personal information filled up. The scoring of the answer scripts and analysis of the responses was done next. Feedback strategy was chalked out and the First experimental group i.e. Teacher Feedback group was given Feedback by the Teacher (Investigator). After Teacher Feedback group the students were asked to self-assess themselves with the help of Response Analysis and Self-Assessment Performa by filling up expected marks questions-wise.

The same procedure was adopted for the Peer Feedback group and No Feedback group. The only difference was that in the PFB group, the Feedback was
received by the subjects from their peers through teacher supervised discussion in small groups. At the end of feedback they were asked to self-assess themselves by giving expected marks question-wise in the Response Analysis and Self-Assessment Performa. The No Feedback group did not receive Teacher Feedback or Peer Feedback. They were also asked to self-assess themselves with the help of Response Analysis Self-Assessment Performa. This whole cycle was repeated for Achievement Test in Chemistry II and Achievement Test in Chemistry III.

In between these cycles the data with respect to the other independent variables and covariates were obtained. The subjects were told their scores in each of the Achievement test in Chemistry and on the other tests/scales.

**Data Analysis-**

The data were analyzed objective-wise as follows:

1. For studying the effect of Treatment, Self-concept and their Interaction on Accuracy of Self-Assessment of Achievement in Chemistry by considering Self-confidence and Intelligence as covariates, the data were analyzed with the help of 3X2 Factorial Design ANCOVA.

2. For studying the independence of Treatment and Bias in Accuracy of Self-Assessment of Achievement in Chemistry (Under/Over assessment), Chi-square test was used.

**Results and Interpretation-**

1. **Effect of Treatment, Self-concept and their interaction on Accuracy of Self-Assessment of Achievement in Chemistry by considering Self-confidence & Intelligence as covariates**

   The first objective of the research was to study the effect of Treatment, Self-concept and their interaction on ASAAC by considering Self-confidence and Intelligence as covariates. Besides three levels of Treatment, there were two levels of Self-concept namely Average and above Self-concept and Below
Average Self Concept. Thus, the data were analyzed with the help of 3X2 Factorial Design ANCOVA when Self-confidence and Intelligence were taken as covariates.

**Summary of 3X2 Factorial Design ANCOVA for ASAAC of students by taking Self-confidence and Intelligence as covariates**

<table>
<thead>
<tr>
<th>Source of variance</th>
<th>df</th>
<th>SS_{y,x}</th>
<th>MSS_{y,x}</th>
<th>F_{y,x}</th>
</tr>
</thead>
<tbody>
<tr>
<td>Treatment</td>
<td>2</td>
<td>6003.89</td>
<td>3001.95</td>
<td>41.39**</td>
</tr>
<tr>
<td>Self-concept</td>
<td>1</td>
<td>14.13</td>
<td>14.13</td>
<td>0.19</td>
</tr>
<tr>
<td>Treatment X Self Concept</td>
<td>2</td>
<td>105.53</td>
<td>52.76</td>
<td>0.72</td>
</tr>
<tr>
<td>Error</td>
<td>116</td>
<td>8414.20</td>
<td>72.54</td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>121</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**denotes significant at 0.01 level of significance

* denotes significant at 0.05 level of significance

**Effect of Treatment on ASAAC by taking Self-confidence and Intelligence as covariates**

From Table, it can be seen that adjusted F value for Treatment is 41.39 which is significant at 0.01 level of significance with df =2/116 when Intelligence and Self-confidence were taken on covariates. It indicates that the adjusted mean scores of ASAAC of students treated with Teacher Feedback group, Peer Feedback group, No Feedback differed significantly when Intelligence and Self-confidence were taken as covariates. In the light of this the null hypothesis that there is no significant effect of Treatment on ASAAC is rejected.

To study as to where the differences in ASAAC lie, pairwise comparisons of the three Treatment groups were undertaken, the results of which are given in the Table below:

**Pair wise comparison of ASAAC of the three Treatment groups by considering Self-confidence and Intelligence as covariates**
<table>
<thead>
<tr>
<th>Treatment Pairs</th>
<th>Mean difference (I-J)</th>
<th>Standard error</th>
</tr>
</thead>
<tbody>
<tr>
<td>Peer Feedback</td>
<td>14.47**</td>
<td>2.23</td>
</tr>
<tr>
<td>Teacher Feedback</td>
<td></td>
<td></td>
</tr>
<tr>
<td>No Feedback</td>
<td>18.46**</td>
<td>2.04</td>
</tr>
<tr>
<td>Teacher Feedback</td>
<td></td>
<td></td>
</tr>
<tr>
<td>No Feedback</td>
<td>3.99</td>
<td>1.82</td>
</tr>
<tr>
<td>Peer Feedback</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

It is clear from the Table that out of three pairs of Treatment groups the difference in mean scores of ASAAC of students in two pairs are significant at 0.01 level of significance whereas in third pair this difference is not significant at 0.05 level of significance. The difference in mean scores of ASAAC between the Peer Feedback group and Teacher scores Feedback group is 14.47, which is significant at 0.01 level of significance. This means that the Teacher Feedback was found to be more effective in terms of ASAAC than Peer Feedback. Likewise, the difference between mean scores of ASAAC of No Feedback group and the Teacher Feedback group was found to be 18.46, which is significant at 0.01 level of significance. It means that the Teacher Feedback was found to be superior to the No Feedback in terms of ASAAC of students. The difference in mean scores of ASAAC of No Feedback group and Peer Feedback group was found to be 3.99, which is not significant at 0.05 level of significance. This means that the two groups were not found to be different from each other as far as ASAAC of students is concerned provided Intelligence and Self-confidence were taken as covariates.

**Effect of Self-concept on ASAAC by taking Self-confidence and Intelligence as covariates**

The adjusted F value for Self-concept is 0.19, which is not significant at 0.05 level of significance with df =1/116. It shows that adjusted mean scores of ASAAC of students belonging to two Self-concept groups did not differ significantly. Thus, there was no significant effect of Self-concept on ASAAC when Intelligence and Self-confidence were taken as covariates. In the light of
this, the null hypotheses that there is no significant effect of Self-concept on ASAAC when Intelligence and Self-confidence were taken as covariates is not rejected.

**Effect of Interaction between Treatment and Self-concept on ASSAC by taking Self-confidence and Intelligence as covariates**

The adjusted F value for the interaction between Treatment and Self-concept was found to be 0.72, which is not significant at 0.05 level of significance with df = 2/116. It indicates that there was no significant effect of the resultant of interaction between Treatment and Self-concept on ASAAC of students when Intelligence and Self-confidence were taken as covariates. In the light of this, the null hypothesis that there is no significant effect of interaction between Treatment and Self-concept on ASAAC of students when Intelligence and Self-confidence were taken as covariates is not rejected. It may therefore be concluded that ASAAC was found to be independent of interaction between Treatment and Self-concept when Intelligence and Self-confidence were taken as covariates.

2. **Independence of Treatment and Bias in Accuracy of Self-Assessment of Achievement in Chemistry**

The second objective of the research was to study the Independence of Treatment and Bias in ASAAC of students. There were three levels of Treatment namely, Teacher Feedback, Feedback and No Feedback. Similarly, there were Two levels of Bias viz. Under Assessment and Over Assessment.

The frequency data were analyzed with the help of Chi-square Test.

**Observed and Expected Frequencies, Adjusted Residuals and Chi-Square Value.**

<table>
<thead>
<tr>
<th>Bias</th>
<th>Treatment</th>
<th>Teacher Feedback</th>
<th>Peer Feedback</th>
<th>No Feedback</th>
<th>Total</th>
<th>Chi-Square</th>
</tr>
</thead>
<tbody>
<tr>
<td>Under</td>
<td>Observed</td>
<td>19</td>
<td>7</td>
<td>11</td>
<td>37</td>
<td></td>
</tr>
<tr>
<td>Frequency</td>
<td>Expected Frequency</td>
<td>Adjusted Residual</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>-----------</td>
<td>-------------------</td>
<td>------------------</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Over</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Observed Frequency</td>
<td>9</td>
<td>31</td>
<td>47</td>
<td>87</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Expected Frequency</td>
<td>19.6</td>
<td>26.7</td>
<td>40.7</td>
<td>87</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Adjusted Residual</td>
<td>-5.0**</td>
<td>1.8</td>
<td>2.5*</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Observed Frequency</td>
<td>28</td>
<td>38</td>
<td>58</td>
<td>124</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Expected Frequency</td>
<td>28</td>
<td>38</td>
<td>58</td>
<td>124</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

From the above Table 4.8.1 it can be observed that Chi-square value is 24.07, which is significant at 0.01 level of significance with df =2. It indicates that Treatment and Bias are significantly related with each other. In this context the null hypothesis that Treatment and Bias are Independent of each other is rejected. Thus it can be concluded that Bias significantly depends on Treatment. Further, an inspection of the all the six Adjusted Residuals it is noticed that only two of the cells have Adjusted Residuals which are significant at 0.01 level of significance. Since the Observed Frequency is more than the Expected Frequency it can be said that Teacher Feedback group under Assessed themselves significantly. Also, the Adjusted Residual for No Feedback group was found to be significant at 0.05 level of significance. Thus, there were significant differences in the observed and expected frequencies in under and over assessment groups respectively. The positive sign for the Adjusted
Residual value in the Over Assessment group shows that Observed Frequencies were significantly greater than the expected frequencies. Hence, students of the No Feedback group tended to Over Assess themselves significantly. Both the adjusted residual values for the Peer Feedback group were not found to be significant at 0.05 level of significance. Thus, there was no significant difference between the Observed and Expected Frequencies either in Under or Over Assessment group respectively. Hence students of these groups equally Over assessed or Under assessed themselves.

**Findings of the Study**-
Accuracy of Self-Assessment of Achievement in Chemistry was found to be significantly affected by Feedback when the groups were equated on Intelligence and Self Confidence. Students were most accurate in Self-Assessment of Achievement in Chemistry when given Teacher Feedback as compared to the Peer Feedback or No Feedback.

1. Accuracy of Self-Assessment of Achievement in Chemistry was found to be unaffected by each of Self Concept. It is also independent of Interaction between Treatment and Self Concept.

2. Feedback Strategies were found to be significantly related with Bias in Accuracy of Self-Assessment of Achievement in Chemistry. Teacher Feedback resulted in Under Assessment whereas the students of the No Feedback group tended to Over Assess themselves significantly.

**References**-


Paper-3

A Comparative study on the Teaching Competency between Novice and Veteran Teachers in the Teaching Learning Process of Secondary School of Bilaspur City Chhattisgarh

Dr. Sunil Kumar Sain
A Comparative study on the Teaching Competency
between Novice and Veteran Teachers in the Teaching
Learning Process of Secondary School of
Bilaspur City Chhattisgarh

Dr. Sunil Kumar Sain

Abstract

Education in the broadest sense of the term is meant to aid the human being in
his/her pursuit of wholeness. Wholeness implies the harmonious development of
all the potentialities God has given to a human person. Researcher has taken
variable teaching competency on teaching of novice and veteran teacher. The
teacher acquires that knowledge through his continuous efforts and learns
presentation during their training which determines his effectiveness. This
research study is mainly of an exploratory nature. It is a comparative study of
teaching competency between the Novice teachers’ (whom are new in teaching
profession with the idea of new generations & their demands & E- technology,
ICT and practice of new methods and trends in teaching learning process) and
Veteran teachers’ (whom are having plenty of years of experience in the
teaching learning process and pedagogy) of Secondary school (Government
and Private both with the Affiliation of CBSE) of Bilaspur city.

Keywords: Teaching competency, E- technology, ICT, Novice, Veteran

Introduction-

Education is a systematic process through which a child or an adult acquires
knowledge, experience, skill and sound attitude. It makes an individual
civilized, refined, cultured and educated. For a civilized and socialized society,
education is the only means. Its goal is to make an individual perfect. Every

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society gives importance to education because it is a panacea for all evils. It is the key to solve the various problems of life. Waking up to life and its mysteries, its solvable problems and the ways to solve the problems and celebrate the mysteries of life. Waking up to the inter-dependencies of all things, to the threat to our global village, to the power within the human race to create alternatives, to the obstacles entrenched in economic, social and political structures that prevent our waking up.

**Meaning of the Problem**

The research study in hand is mainly of an exploratory nature. It is a comparative study of teaching competency between the Novice teachers’ (whom are new in teaching profession with the idea of new generations & their demands & E- technology, ICT and practice of new methods and trends in teaching learning process) and Veteran teachers’ (whom are having plenty of years of experience in the teaching learning process and pedagogy) of Secondary school (Government and Private both with the Affiliation of CBSE) of Bilaspur city. It has been undertaken in order to assess the teaching competency of both with their specific qualities & traits.

**Teaching Competency**

Teaching competency includes teaching behavior and teaching skills. Teaching behaviors’ can be linked with knowledge of the subject matter and its presentation. The teacher acquires that knowledge through his continuous efforts and learns presentation during their training which determines his effectiveness. Barr (1952) remarked “Teacher effectiveness is a relationship between teachers, pupils and other persons concerned with the educational understanding. Teaching competency is a combination of traditional ideas that were propounded by the great educators in the post on one hand and at the new ideas like- systematic approach to education on the other hand”. The
competency may vary from person to person, place to place, situation to situation or due to generation gap.

**Rational of the Study**-
Teacher competence affects the quality of teaching and determines the success of students’ learning. Richards and Schmidt (2002, p. 94) define competence as “a description of the essential skills, knowledge and behaviors’ required for the effective performance of a real world task of activity”. The definition covers three key words: skills, knowledge, and behaviors’ that determine the effectiveness of performing an action. Relating to teachers, Bailey (2006, p. 210) describes competence as “statements about what teachers are supposed to know and be able to do”. While in delivering these knowledge, skills and information’s, teachers have to be competent towards present educational aim & it’s must to assess the competent of the teachers towards imparting knowledge to students so the today’s aim of education could be fulfilled. The new generation of students born roughly after 1980 is considered to be “Digital Natives” who are fundamentally different from previous generation (Prensky, M. (2001). “They’ve had “Digital technology surrounding them from the time they were infants. …That digital world affords them many things that the previous world didn’t”.

In the past decade, there has been a considerable amount of discussion on “Digital Natives”. The main argument is that the digital culture in which the Digital Natives have grown up has influenced their preferences and skills in a number of key areas related to education.

As teachers have tremendous potential to affect the beliefs and values of the students, it is important to understand teachers’ competencies in the present scenarios. Teachers need to adjust their pedagogical models to suit the new kind of learner they are encountering in this new generation of students. The class rooms have become modern as the smart classes & ICT in the teaching are
being involved, even RMSA also state for computer based teaching for the digital native. In the present scenario the methods of teaching and evaluations are changing in the respect of “digital native” as new method other than the traditional methods are coming into existence and evaluation scheme like CCE are introduced to assess the “digital natives”. In our present classroom TLP there is difference in the teaching of novice and the veterans at one side new comers comes with latest techniques and technology to teach while in other side veterans having experience and strategies.

So the purpose of this study is to find out the teaching competency in new methods and strategies between novice and veteran teacher.

Research Question-

- How is the competency on teaching of novice and veteran teacher?
- Which group is more competent in teaching in the present scenario?
- Are they both competent to teach the native learners?
- Does the generation gap create a hinge in teaching learning process?

To answer these questions it is important to do a study about this topic.

Objectives-

1. To study the relationship between novice and veteran teacher in their teaching competency.
2. To compare the teaching competency of novice and veteran teacher.
3. To compare the effect of generation gap in the teaching of male veteran and female veteran teacher.

Hypothesis-

H1- There will be no significant difference due to effect of generation gap among total novice and total veteran teachers in their teaching competency.

H2 There will be no significant difference due to effect of generation gap in the teaching competency of private novice and private veteran teachers.
H3 There will be no significant difference due to effect of generation gap in the teaching competency of government novice and government veteran teachers.
H4 There will be no significant difference in the teaching competency between male veteran and female veteran teachers.

**The Plan & Procedure**

After identifying the problem and accepting the need to study on it another important part occur; the research procedure. It is important to choose an ideal and suitable research procedure and decide the design, to find out and identify a reliable and valid solution for the problem so the objectives of the study can be fulfilled. For the sake of it, it’s must to identify the population its ideal replica; sample, the design & method, the tools & an epitome statistics. Without information of the above none of the research can move forward towards the solution. In this chapter related to the present study, the method, population, samples tools and proper statistics have been described.

**Population**

A population is any group of individual that has one or more characteristics in common. A population may be defined as a group of individuals with at least one common characteristic which distinguish that group from other individuals. The population of this study is the secondary school teachers of the Bilaspur city whom are the teachers of class VI to class XII and already done the B.Ed. training or any other teacher training equivalent to it and are belonging to the age group of below 30 for Novice and having experience less than 02 years and above 50 for Veteran teacher and having experience of more than 20 years.

**Sample**

A list of all the schools of Bilaspur city was collected according to the nature as explained in the delimitation of the study. Schools were categorized into government and private schools. From the list of government three schools were selected on the basis of random sampling method and from the list of private
school eight schools were selected on the basis of random sampling method. From these selected school, novice and veteran teachers’ were taken for the purpose of study. On the basis of sex male teachers and female teachers’ were categorized. Out of the total population of novice and veteran teachers’ of government school, 10 male and 10 female teachers’ were selected on the basis of random sampling method. In the same way out of the total population of novice and veteran teachers’ of private school, 10 male and 10 female teachers’ were selected on the basis of random sampling method. In this way total sample selected for the study was of 40 teachers’; 20 veterans and 20 novice teachers’ including under categorization of 10 male and 10 female in both the novice and veteran teachers’ group.

Methodology-
In the present study descriptive cross sectional survey method of investigation has been used. Survey research, is that branch of social scientific investigation that studies large and small population by selecting and studying samples chosen from the population. The purpose of survey is to ascertain the prevailing present condition. This method studies, describe and interprets what exists at present. It studies condition or relationship that exists, practices that prevail, beliefs, points of view, attitude, liking or disliking that are held, processes that are going on, effects that are being felt and the trends that are developing.

* Factorial design (2x2x2) was used for the study.

Tool of Research-
To do this study various tools were observed as B. K. Passi and M. S. Lalitha’s general teaching competency scale (GTCS) but in this limitation occurs that this test, only test the general competency of the teachers’ similarly the LOTS also rate the general competency but in the present study, specific study on the teaching competency for new method & strategies had been studied thus
investigator had prepared a tool on teaching competency for new method & strategies and thus used the self-made tool for this study.

**The Teaching Competency Rating Scale**-

The teaching competency scale constructed by the investigator is designed to assess the competency toward teaching with its various objectives and aspects related to new trends and strategies for the 21 century learners. This test is based on the concept; as the so called intelligence in not a unitary concept or trait but it is composed of many traits, thus this test is to measure differential traits on teaching competency.

For such sake to assess the teaching competency researcher has made some dimension and its core competencies. The researcher first prepared a booklet including objectives, dimension, and explanation of dimension and then the test had been structured; first researcher constructed more than 30 questions’ and gave it to expert panel with the help of dissertation guide, the panel suggested some manipulation, on the suggestions’ and feedbacks’ from panel, the researcher had picked up 30 question and prepared a teaching competency scale.

**Testing and Analysis of Hypothesis**-

**H1- There will be no significant difference due to effect of generation gap among total novice and total veteran teachers in their teaching competency**

To test this hypothesis the t- test has been used to find out the difference between total novice and total veteran teachers Table showing Mean, SD, and t- value of teaching competency of total novice and total veteran teachers

<table>
<thead>
<tr>
<th>Teachers</th>
<th>No of Teachers N</th>
<th>Mean</th>
<th>Standard Deviation</th>
<th>Degree of Freedom</th>
<th>t-value</th>
<th>Remark</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total Novice</td>
<td>20</td>
<td>124.2</td>
<td>7.186</td>
<td>38</td>
<td>3.660</td>
<td>Significant</td>
</tr>
<tr>
<td>Total</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Above table shows that the mean of teaching competency in the total novice teachers is higher than the mean of teaching competency in the total veteran teachers. The results is significant at 0.01 level of confidence because the required t-value for ‘38’ degree of freedom at ‘0.01’ level of confidence the table value is ‘2.71’, whereas the obtained value is ‘3.66’, which is higher than the table value. On the basis of the above result the null hypothesis H1 is rejected.

Thus we conclude that there is significant difference in the teaching competency of novice teacher and veteran teacher and from the above mean it’s clear that the competency score of novice teachers is higher than the competency score of veteran teachers.

**H2 There will be no significant difference due to effect of generation gap in the teaching competency of private novice and private veteran teachers.**

Table showing Mean, SD, and t-value of teaching competency of private novice and private veteran teachers

<table>
<thead>
<tr>
<th>Teachers</th>
<th>No of Teachers N</th>
<th>Mean</th>
<th>Standard Deviation</th>
<th>Degree of Freedom</th>
<th>t-value</th>
<th>Remarks</th>
</tr>
</thead>
<tbody>
<tr>
<td>Private Novice</td>
<td>10</td>
<td>123.1</td>
<td>6.56</td>
<td>18</td>
<td>3.179</td>
<td>Significant</td>
</tr>
<tr>
<td>Private Veteran</td>
<td>10</td>
<td>112.1</td>
<td>8.76</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

* Level of significance is 0.01

Table No. 4.1.B shows that the mean of teaching competency in the private novice teachers is higher than the mean of teaching competency in the private veteran teachers. The results is significant at ‘0.01’ level of confidence because
the required t- value for ‘18’ degree of freedom at ‘0.01’ level of confidence the table value is ‘2.88’, whereas the obtained value is ‘3.179’ which is higher than the table value. On the basis of the above result the null hypothesis (H0-2) is rejected.

Thus we conclude that there is significant difference in the teaching competency of private novice teacher and private veteran teacher and from the above mean it’s clear that the competency score of private novice teachers is higher than the competency score of private veteran teachers.

**H3 There will be no significant difference due to effect of generation gap in the teaching competency of government novice and government veteran teachers.**

To test the Hypothesis, t- test for small sample below 30 has been computed between the scores of government novice and government veteran teachers.

Table showing Mean, SD, and t- value of teaching competency of government novice and government veteran teachers

<table>
<thead>
<tr>
<th>Teachers</th>
<th>No of Teachers</th>
<th>Mean</th>
<th>Standard Deviation</th>
<th>Degree of Freedom</th>
<th>t-value</th>
<th>Remarks</th>
</tr>
</thead>
<tbody>
<tr>
<td>Govt. Novice</td>
<td>10</td>
<td>127.8</td>
<td>5.028</td>
<td>18</td>
<td>3.270</td>
<td>Significant</td>
</tr>
<tr>
<td>Govt. Veteran</td>
<td>10</td>
<td>118.1</td>
<td>7.93</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

* Level of significance is 0.01

Table No. 4.1.C shows that the mean of teaching competency in the government novice teachers is higher than the mean of teaching competency in the government veteran teachers. The results is significant at ‘0.01’ level of confidence because the required t- value for ‘18’ degree of freedom at ‘0.01’ level of confidence the table value is ‘2.88’, whereas the obtained value is
‘3.270’ which is higher than the t-table value. On the basis of the above result the null hypothesis (H0-3) is rejected.

Thus we conclude that there is significant difference in the teaching competency of government novice teacher and government veteran teacher.

**H4-There will be no significant difference in the teaching competency between male veteran and female veteran teachers.**

To test the Hypothesis, t- test for small sample below 30 has been computed between the scores of Female veteran and Male veteran teachers.

Table showing Mean, SD, and t- value of teaching competency of Female veteran and Male veteran teachers

<table>
<thead>
<tr>
<th>Teachers</th>
<th>No of Teachers N</th>
<th>Mean</th>
<th>Standard Deviation</th>
<th>Degree of Freedom</th>
<th>t-value</th>
<th>Remarks</th>
</tr>
</thead>
<tbody>
<tr>
<td>Female veteran</td>
<td>10</td>
<td>115.3</td>
<td>10.53</td>
<td>18</td>
<td>0.510</td>
<td>Not Significant</td>
</tr>
<tr>
<td>Male veteran</td>
<td>10</td>
<td>113.1</td>
<td>8.29</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

* Level of significance is 0.01

Table No. 4.3.B shows that the mean of teaching competency in the Female veteran teachers is higher than the mean of teaching competency in the Male veteran teachers. The results is not significant at ‘0.01’ level of confidence because the required t-value for ‘18’ degree of freedom at ‘0.01’ level of confidence, the table value is ‘2.88’, whereas the obtained value is ‘0.510’ which is lower than the table value. On the basis of the above result the null hypothesis (H0-3B) is accepted.

Thus we conclude that there is no significant difference in the teaching competency of Female veteran teachers’ and Male veteran teachers’.

**Findings of the Research-**
1. There was significant difference due to effect of generation gap among total novice and total veteran teachers in their teaching competency.
2. There was significant difference due to effect of generation gap in the teaching competency of private novice and private veteran teachers.
3. There was significant difference due to effect of generation gap on in the teaching competency of government novice and government veteran teachers.
4. There were significant difference due to effect of generation gap in the teaching competency between male novice and male veteran teachers.
5. There were significant difference due to effect of generation gap in the teaching competency between female novice and female veteran teachers.

Conclusions-

1. After analysis & study it occurs that there was significant difference between total novice and total veteran teacher in their teaching competency.
2. There was significant effect of generation gap in the teaching competency of novice and veteran teacher.
3. The impact of electronic age in the teaching technique of novice teachers was higher in comparison to veteran teacher.
4. The teachers’ acceptance of new methods and technique for teaching was higher in novice teachers rather than veteran teachers.
5. Sex showed no influence in the teaching competency of novice and veteran teachers.
6. Organization (Government & private) showed no influence in the teaching competency novice and veteran teachers.
7. The study showed from the various dimensions the novice teachers have variance with veteran teachers.
8. From the discussion of various response of novice and veteran teachers’ in the various dimension it’s been clear

**Educational Implications-**

- Orientation program can be done effectively and immensely for the teachers before adopting the new strategies and trend according to deeds & demands.
- Teacher educators and novice teachers need to be constantly mindful of the expectations and demands from schools. As research studies (e.g., Burden, Peterson, 1979; 1990) also support by finding similar to researcher, he have reported on changes that occur during a teacher’s career, teacher competence is a dynamic notion.
- The curriculum can be prepared in such a way by considering all the level of teachers (Novice & Veteran).
- The new methods should not be forcefully enforced on the teachers (Novice & Veteran) it can be done according to competence of them.
- One of the most important components of general pedagogical knowledge is that of effectively managing a classroom full of students. The teachers can perceive and manage the dynamic classroom, emerged from research exploring the behaviors’ of veteran and novice teachers.
- The planning and implementing of new trend should be done as change requires everywhere but it should be feasible not drastic and with concerned to each dimension of teachers for making learning sound and better with it’s pure quality

**References-**


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Paper-4

Human Rights Education and Global Peace

Dr. Rajesh Kumar Srivastav
Human Rights Education and Global Peace

Dr. Rajesh Kumar Srivastav

Abstract

The main purpose of the study is to define the role of Human Rights Education in regards to global peace. The horrors of First and Second World Wars manifold the importance of Human Rights Education. The catastrophe of the Wars confirmed and strengthened the belief that the recognition of the inherent dignity and of equal and inalienable rights of all members of human family is the foundation of freedom, justice and global peace in the world. This provision was inscribed in the Universal Declaration of Human Rights, which has become the cornerstone of International Human Rights law emerging in subsequent years. The two international covenants on Human Rights (1966), defining civil, cultural, economic, political and social rights, were a major landmark in the process. In democratic country like India, there were global issues of terrorism, ethnic conflict, social inequality, environmental destruction, political rivalry, parochialism, language policy, casteism, religion feeling etc. increase the importance of human rights education. Thus, Education for human rights is therefore not only of great importance but indispensable as wells. This has been recognized in many international instruments. The Universal Declaration of Human Rights states that education shall be directed to the full development of human personality and to the strengthening of respect for human rights, fundamental freedoms, universal wellbeing, brotherhood, Vasudhev Kutumbkam, Satyam Shivam Sundram and end to the bloodshed, tyrannical cruelty of the oppressors against the innocent, weak and peace-loving oppressed victims.

Keywords: Human Rights, Peace, Education.

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**Introduction**

All men and women are bestowed with some Human Rights by the constitution because it is essential for the development of personality of citizens as well as establishment of democracy in India. All Human Rights derive from the dignity and worth inherent in the human person is the central subject of Human Rights and Fundamental Freedom. In simple terms, whatever adds to the dignified and free existence of Human Being should be regarded as Human Right. Evolution and crystallization of the concept took a long time. In recorded history and ancient scriptures like Bible, Ramayana, Veda, Quran, Mahabharata, Geeta and religious books like Jainism, Buddhism, and Sikhism etc. There have been references to the basic of Human Rights, though they were not referred to by that name. Many important landmarks may be mentioned on this way, such as, in England, Magna Carta (1215), the petition of Rights (1628) and the bill of Rights (1689). It is said by the modern historian that Magna Carta was a petition urging the king to concede certain rights to particular sections of the people. The Constitution of India which came into effect in 1950 incorporated a ‘part’ on ‘Fundamental Rights’ of the citizens. In India, the protection of Human Rights Act, 1993 defined Human Rights as ‘the right relating to liberty, equality and dignity of the individual guaranteed by the Indian Constitution as embodied in the Fundamental Rights and International Covenants.

**Meaning of Human Rights**

According to Nagendra Singh, the concept of human rights envisages highest value of religion, the supreme principles of philosophy and the benign tenets of economic well being. Moses Moscowilz is of the view that “human rights are more than a collection of formal norms; they are dynamic, political, social, economic, juridical, as well as moral, cultural and philosophic conditions which define the intrinsic values.
of man and his inherent dignity”. In short, human rights are said to be “common language of humanity”.

**Meaning of Peace Education**

Peace Education may be defined as the process of acquiring the values, the knowledge and developing the attitude, skills, and behaviours to live in harmony with oneself, with others, and with the natural environment. Ian Harris and John Synott have described Peace Education as a series of “teaching encounters” that draws from people:

- their desire for peace,
- nonviolent alternatives for managing conflict, and
- skills for critical analysis of structural arrangements that produce and legitimate injustice and inequality.

According to Federico Mayor – Peace is possible for life at all stages and it is up to man to choose his destiny or to suffer from the horrors of war. Today mankind is at the cross-road where he has to choose with courage, determination and imagination.

In the language of UNESCO, ‘War begins in the minds of men’; therefore, the remedy also has to take shape in the human mind. So there is a great need to train human minds to work towards peace. It is high time to review our curriculum and give a place for Peace Education in our curriculum.

**Historical Overview of Human Rights Education and Peace Education**

The history of mankind is marked by efforts to ensure respect for the dignity of human beings. The concept of human rights was introduced and developed by thinkers from various cultural and religious traditions. An important contribution to the promotion of this idea was made by statesmen and lawyers and written norms establishing protection of the rights of individuals were gradually inscribed in national laws.
Steps were also taken to establish international human rights standards, in particular in the nineteenth century and after the First World War. However, it was only in the second half of the twentieth century that a comprehensive international system of human rights promotion and protection was set up. This was mainly due to the efforts of the United Nations, its Specialized Agencies and regional intergovernmental organizations.

The charter of the United Nations expressed the determination of Member States ‘to reaffirm faith in fundamental human rights, in the dignity and worth of the human person, in the equal rights of men and women……’6 The Second World War proved that internal massive violations of human rights lead to the breach of international peace. The horrors of this war confirmed and strengthened the belief that ‘the recognition of the inherent dignity and of the equal and inalienable rights of all members of the human family is the foundation of freedom, justice and peace in the world’.7 This provision was inscribed in the Universal Declaration of Human Rights, which has become the cornerstone of international human rights law emerging in subsequent years. The two International Covenants on Human Rights (1966), defining civil, cultural, economic, political and social rights, were a major landmark in this process.

Education for human rights is therefore of great importance. This has been recognized in many international instruments. The Universal Declaration of Human Rights states that ‘education shall be directed to the full development of human personality and to the strengthening of respect for human rights and fundamental freedoms’.8 Similar provisions can be found in a number of

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6 Preamble of the Charter.
7 The Universal Declaration of Human Rights, para.6 of the Preamble.
8 Article 25, para 2.
This means that States are now duty-bound to educate for human rights.

Education for human rights is an important facet of UNESCO, whose Constitution imposes the obligation to further universal respect for justice, the rule of law and human rights and fundamental freedoms. In order to promote human rights education, UNESCO adopted in 1974 a specific normative instrument\(^9\) and in the following years along with many other activities, organized three major international meetings on this subject.

The first of these, the International Congress on the Teaching of Human Rights (Vienna, Austria, 1979), underlined that human rights education and teaching must aim at fostering attitudes of tolerance, respect and solidarity; providing knowledge about human rights; and developing the individual’s awareness of the ways and means by which human rights can translated into social and political reality. The second congress, held in Malta in 1987, defined guidelines for human rights education at international, national and regional levels, and stressed the necessity to create a complete system of human rights teaching and education with the broad participation of public organizations and the media.

The third congress took place in March 1993 in Montreal, Canada.\(^11\) This meeting, held after the end of the Cold War, was the first international gathering to stress the intrinsic link between human rights and democracy. The World Plan of Action on Education for Human Rights and Democracy, adopted by the Congress, declares that education for democracy is an integral part of education

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\(^11\) It was organized by UNESCO and the United Nations Centre for Human Rights, in collaboration with the Canadian Commission for UNESCO.
for human rights which is not only a prerequisite for the realization of human rights, democracy and social justice but is itself a human rights.

The importance of human rights education was emphasized by the Vienna Declaration and Programme of Action adopted by consensus by representatives of 171 States at the World Conference on Human Rights (June 1993). The Conference confirmed that respect for human rights is an indispensable element of a genuine democracy and strongly supported the concept of the unity and universality of human rights. It declared that all human rights are universal, indivisible, interdependent and interrelated and underlined that the ‘the international community must treat human rights globally, in a fair and equal manner, on the same footing and with the same emphasis.’

In accordance with recommendations of the Vienna Conference, the United Nations Decade for Human Rights Education (1995-2004) was proclaimed. Co-ordination for the implementation of the Decade’s Plan of Action has been entrusted to the United Nations High Commissioner for Human Rights. The Plan foresees that UNESCO should play a central role in the design; implementation and evaluation of projects contained therein and should collaborate with the High Commissioner and the United Nations Centre for Human Rights.

In a Memorandum of Co-operation, signed between the Director-General of UNESCO and the United Nations High Commissioner for Human Rights in October 1995, close collaboration in implementing activities related to education for human rights and democracy is envisaged.

UNESCO’s long-term objective is the creation of a comprehensive system of education for human rights, democracy and peace, embracing all levels of

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12 The Vienna Declaration and Programme of Action, para.5.
education and available to all. This means that the system should cover formal education as well as out-of-school and adult education.

The Organization concentrates its efforts on assistance to Member States in elaborating national strategies for human rights education, and on the preparation and dissemination of teaching aids and curricula. Particular attention is paid to the reinforcement of networks active in education for human rights and democracy, such as the Associated Schools Project\(^{14}\) and the UNESCO Chairs, established at institutions of higher education in all regions of the world.

The ultimate goal of these actions is the creation of a culture, the very core of which is adherence to the basic values of human rights and democracy and readiness to defend them in daily life. It presumes the formation of certain behavioral patterns. Such a culture of human rights and democracy can only be constructed by the combined efforts of educators, families, the mass media, and inter-governmental and non-governmental organizations, in other worlds by all social actors and by civil society as a whole.

Since its very beginning UNESCO has provided teaching materials on human rights for all levels of education and for the general public as well as for activists and non-governmental organizations working for the promotion of human rights.\(^{15}\)

Peace Education is not a modern invention or an innovation of the modern age of science and technology. As for back as about five thousand years ago, the Rig Veda has ushered in a new area of enlightenment and the concept of one-world—the Vedanta idea of “Brahman” speaking of “oneness of the mankind”. It sings of mutual co-existence and eternal peace. It dreams of “the fatherhood of

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\(^{14}\) 3,300 schools in 125 countries took part in this project at the end of 1995.

\(^{15}\) The first such teaching aid (Human Rights: Comments and Interpretations) was published in 1949. Since that time about 200 publications on human rights-related matters have been issued by UNESCO.
God” and the “brotherhood of man”. The Indian heritage has been based on universal brotherhood and eternal peace.

**Human Rights Education and Peace Education**-

Peace Education and Human Rights Education go side by side. Human Rights aware human beings to aware about their various political and civil rights. One the other hand, peace education brings peace of mind in person. Human Rights Education aims at proving pupils and students with the abilities to accompany and produce societal changes. Education is seen as a way to empower people, improve their quality of life and increase their capacity to participate in the decision-making processes leading to social, cultural and economic policies (UNESCO). The concept underpinning Human Rights Education is that education should not only aim at forming trained, professional workers, but also at contributing to the development of individuals who possess the skills to interact with in a society. Human Rights Education and dissemination is a fundamental human right. This imposes on governments in particular great responsibilities to explicate, propagates and disseminates human rights principles and their protection mechanisms.

A number of educational initiatives have areas of overlap with Peace Education, and with each other. These include children’s rights/human rights education, education for development, gender training, landmine awareness and psychosocial rehabilitation.

The root of “Education” is “educare”, to lead out. Peace Education seeks to draw out from people their own best instincts to live more peacefully with others. This implies working from within, starting the transformation of society beginning with each individual.

Learning about peace means learning the skills, attitudes and values that one needs in order to contribute to peace and help to maintain it. For example, this means learning to deal with conflicts without the recourse to violence, learning
to think creatively, learning to apply the methods of active nonviolence or learning to deal with conflicts without recourse to violence, learning to think creatively, learning to apply the methods of active nonviolence or learning to deal with cultural differences in a constructive way. World peace grows through nonviolence, acceptance, fairness and communication. Peace Education would not exist unless people throughout the world believe that world peace is attainable through a multifaceted effort but starting with the children and youth. In the worlds of Indian thinkers and philosopher Sarvepalli Radhakrishna, “We must will peace with our whole body and soul, our feelings and instincts, our flesh and its affections.

Koichiro Matsuura, the past Director-General of UNESCO, has written of Peace Education as being of “fundamental importance to the mission of UNESCO and the United Nations”. Peace Education as being of “fundamental importance to the mission of UNESCO and the United Nations”. Peace Education as a right is something which is now increasingly emphasized by peace research such as Betty Reardon and Douglas Roche. There has also been a recent meshing of Peace Education and human rights education.

Since education for peace is value centered, peace being a value itself; the primary means to achieve this aim is a growing understanding of what are termed universal human values and the various ways and means of practicing them according to the capacities and potentialities of the learners. Human Rights Education may be regarded as one of the approaches to Peace Education. It has been said that if we are to spread real peace in the world we shall have to begin with the children. Today’s children are the citizens of tomorrow. They are the strong pillars of our society, nation and world at large. They need to be the messengers of peace and harmony in the world facing war, injustice, prejudice against color, gender, race etc. Educational institutions are the platform where the young minds are trained to understand the deeper meaning of peace and
human rights. Human Rights and Peace Education should become compulsory subject at all level of education.

**Conclusion**
Since human rights is one of the approaches to peace education. The human rights values needed to be set in the young minds so as to create a society full of people who have an understanding to respect the rights of fellow beings, and it would lead to a sustainable development where equality, opportunity, and mutual respect would be the order of the day. For addressing all these issues, there is a need to create an appropriate mechanism to address various issues of human rights education and concerns.

Education is a repository of values, attitudes and dispositions inherent in its structure and methodology. It is for this reason that the objectives of teaching of the different school subjects include that development of attitude, appreciations, interest, values as are appropriate to the subjects. When the various subjects teach in schools and colleges by creating interest in students? This integrated approaches led to peace in the minds of young. Yoga is one of the tool by which peace can be retain in the mind of man.

**Reference**


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Tagore's Idea on Science Education and its significance with reference to National Curriculum Framework 2005

Ritendra Roy
Dr. Asheesh Srivastava
Tagore's Idea on Science Education and its significance with reference to National Curriculum Framework 2005

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Abstract

During the British period, Rabindranath Tagore established a school known as Patha Bhavana at Santiniketan which was based on ancient Indian philosophy. With time the school has gone through lots of change but it still follows the Tagore’s educational philosophy. The objectives of this study were to find out the teaching-learning process of science and the relevance of the approaches as per the criteria of National Curriculum Framework 2005. The present study was descriptive type research. The interview schedule was arranged for three science teachers. It was found that the approaches for teaching science are unique. There is no use of book up to class five for teaching science rather students observes and learn from nature. Students get the opportunity to construct their own knowledge. Evaluation follows the concept of continuous and comprehensive evaluation. “Learning by doing” was emphasized. Development of aesthetic sense was given importance. The science curriculum has the scope to link the classroom knowledge with daily life experience. It was found that the approaches of teaching and learning of science of Patha Bhavana is relevant and have the similarity with NCF-2005’s views. Thus it can be concluded that the view of Tagore for science education is quite modern, unique and significant even these days.

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Keywords: Rabindranath Tagore’s Educational philosophy, Patha Bhavana, Science Education, Constructivism, Learning by doing, National Curriculum Framework 2005

Introduction-

Though the history of science education in India is very old, the modern era of science education of science education was started at the time of British rule. The education system incorporated by the British ruler was alien to Indian culture as it is influenced by the western education system. British brought the Greco-Roman system of knowledge to India in early 19th century, which is the foundation for modern science (Shashidhara, L.S., 2011). But the science education was provided at that time lacking objectives and British used it for their own benefit. Very few students got the opportunity of the science education as the scope was limited.

Rabindranath Tagore and Mahatma Gandhi proposed an alternative model of education at the time of pre-independence which basically gave importance to process than products. In Santiniketan, the school known as Patha Bhavana, founded by Tagore still follows the model proposed by Tagore. Although it has changed many courses due to the limitation of inclusion in the mainstream of Indian school system. Tagore founded his school in 1901 with five students. The school was based on ancient Indian education system ‘Gurukul’. Tagore was very much influenced by the ancient Indian education system where students stay with their guru in a peaceful place which is far away from human life. Thus the school founded by Tagore could be called as “Ashram Vidyalaya”. The initial name of the school was not Patha Bhavana. The school name was “Brahmacharyasrama”. From the name, one can understand the initial objectives of the school.

In order to understand the present scenario of science education, how it is transacted in the school and how much it is significant and relevant in the
present time as per the guideline of NCF-2005, the author decided to conduct a study.

**Statement of the Problem**
The present study is stated as, “Tagore's idea on science education and its significance with reference to NCF-2005.”

**Objectives of the study**
1. To find out the methodology of transaction of science education in PathaBhavana.
2. To find out the significance of the present status of science education in PathaBhavana on the basis of National Curriculum Framework-2005.

**Methodology**
The present study was descriptive type of research. Three science teachers who take classes at elementary level were taken as sample. Interview schedule, containing descriptive questions, was used as research tool. The qualitative data collected was analysed on the basis of the criteria suggested by NCF-2005.

**Major Findings**
- No book is used for teaching science up to class V.
- Though there is no particular book for science, during Bengali class they read “Sahaj Path” (part I, II, III and IV). Some text of these books indirectly teach science.
- Science teachers used various other approach of teaching for transacting knowledge related to science.
- The class name is not science class or environmental science. The name of the class in Bengali is “Prokriti Path” which could be termed as ‘nature lessons’ in English.
- The students under the guidance of teacher roam around the campus and learn about different trees, plants, birds and insects.
- They wander in different season and observe the changes in the trees.
They were asked to collect leaf of different trees and plants and observe the difference in shape.

They were asked to keep the leaves and observe the changes as they were drying and keep the note day to day.

The different parts of a flower are explained to them by taking original flower.

The difference among the different flowers is explained to them.

They able to explain the life cycle of different insects.

They come to know which insects are harmful and which are not.

They able to identify the birds by seeing them and by their tweet.

Students are also encouraged to make small machine and scientific model related to science and environment.

In order to motivate them, those models and machines are exhibited in an annual program.

Seminar talk is arranged for the students on various subjects related to science.

Eminent resource persons of different level are invited for giving lecture and interaction with the students.

The science teachers also attend workshop related to modern approach of teaching.

Students able to learn and understand the environment they are living by observing nature.

The different Rabindra Sangeet taught to them, at different class have the element of science education.

**Interpretation**-

The researcher thinks that the base of the idea of opening an unconventional school in the lap of nature, in other words, an open-air school, maybe the reflection of the Rabindranath Tagore’s own school experience. He felt that the
four walls of the classroom and rigid rules were the obstructions in the development of the human mind. The schools and their nature of the British ruler were nothing but alien to the Indian education system and culture. Tagore’s believe in nature as resources of knowledge and wisdom created the base of an unconventional way of teaching science at the elementary level.

Science is a discipline which can describe the natural phenomena systematically and utilize the natural resources of mankind. At the early stage of science education, students should not be introduced to huge storage of knowledge related to science. They would be frightened seeing these. The objective of education is not to make them frightened. The objective of education is to nurture them, provide the path for construct the knowledge. So it is better to introduce them to science indirectly at first without naming it. In case of Patha Bhavana, the school established by Tagore, the science class at the early stage is known as “Prokriti Path” where the students get the chance of being acquainted with nature and start to know about the different phenomena of it.

The objectives of the class related to science known as “Prokriti Path”, is to provide the students the knowledge related to science and nature. They need to assess the knowledge at their own. As per educational theories, someone learns better and retain the knowledge for a long time if the concept is represented by some concrete example/aids. In Tagore’s school, the students come to know the nature of living in it. Most of the classes are being held at open air. The students get the opportunity of coming in direct contact with nature. They can sense the changes of the season by seeing the changes in the trees of Ashram area. There are different and rare kinds of trees in the core campus which is known as ashram area. The core campus and the adjacent area of Visva Bharati is a place where someone can easily sense the different season not only by feeling the weather and seeing the changes in nature but also through the different Rabindrasangeet which explains the different season and its effects. From early
childhood, the students of Patha Bhavana learn these songs hence learn about nature. This is nothing but ‘softening the boundaries’ of different disciplines to look for the broader concept. NCF 2005 also suggested the same; connecting the knowledge across disciplinary boundaries. These songs are used in different programs organized to celebrate this different season. The programs are “noboborsho”, “borsha-mangal”, “sharodotsav” “bosonto-utsav” etc. These festivals are also helpful in telling the importance of these different seasons in nature and humane life. Further, the students participated in weekly “Sahityasabha” where they present essay, the poems were written by them. Some of the essays are like, “an autobiography of an ant”, “Autobiography of a dog”, “an autobiography of a tree” etc. These kinds of self-written essays help them to think over the issue. They need to think, analyze and justify. It helps to become empathetic to nature and his various resources and components. They understand the importance of different natural resources in human life. NCF 2005 suggested linking the curricular activities with different co-curricular and extra-curricular activities. Patha Bhavana is the institute who blend it perfectly. The students learn about science and particularly about nature through this different kind of program where they participate with joy. Here researcher wants to site some songs of Tagore which the students learn at the elementary level.

<table>
<thead>
<tr>
<th>In Bengali</th>
<th>Translation in English</th>
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In Bengali | Translation in English |
### Darunaagnibane re hridaytrisayahane re.
Rajaninidrahin, dirghodagdho din Aaramnahi je jane re. Suskukanonsakheklantokapotdake Karun katorgane re…”

<table>
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<tbody>
<tr>
<td>The blazing spear hits the thirst of the soul. Sleepless nights and long scorching daytime. No way to respite is known Sings tired bird in an unhappy and anguished note Perched on the branch of leafless tree.</td>
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<tr>
<td>Nothing to be afraid of, I keep staring up the sky. You will appear, I know, disguised as the storm To the heart strained ever since.</td>
</tr>
<tr>
<td>(source: <a href="http://www.geetabitan.com">http://www.geetabitan.com</a>)</td>
</tr>
</tbody>
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### Poush toder daak diyechhe, aay re chole aay aay aay
Daala je taar bhorechhe aaj paaka phosole, mori haay haay haay Hawar neshay utthlo mete digbodhura dhaaner khete - Roder sona chhoriye pore maatir aanchole, mori haay haay haay Hawar neshay utthlo mete digbodhura dhaaner khete - Roder sona chhoriye pore maatir aanchole, mori haay haay haay Maatther bnaashi shune shune aakash khushi holo Ghorete aaj ke robe go, khoło khoło duar khoło Aalor haashi utthlo jege dhaaner shishe shishir lege Dhorar khushi dhore naa go, oi je uthole, mori haay haay haay |

| The onset of winter beacons you, come on, enjoy. Look, crops filling its basket, what a delight. Brisk winds render the rice-field frenzied from all corners Look, golden dust of the sunshine scatter all over the kilt of the earth, What a delight. The sky is ecstatic with the sound of the field-flute. No one is going to stay back home, open the doors. Light sparkle the dewdrops touching the cone of rice, as if smiling – Look, the earth cannot contain its joy, spills over the brim, What a delight. |
| (source: http://www.geetabitan.com) |

There are many more songs which perfectly describe the different season and its effects on the human and other animals. The students learn these songs and hence come to know the nature. They can relate it to what they are observing.
The importance of planting tree and agriculture are also being emphasized in Visva Bharati. Importance of planting tree and agriculture are celebrated on special days through programs known as “Brikkho-ropon” and “Halakarshan” respectively. The students participated in these programs. The beautiful part of “Brikkho-ropon” is that during this program the slokas are chanted for the PanchaMaha-Bhuta (the five elements which we need in everyday life: these are ether, earth, air, fire, and water) in order to offer respect.

The trees are the home of various kinds of birds and insects. The students also come to know about these birds and insects and their lifestyle. NCF 2005 suggested providing adequate room for voicing children’s thoughts, curiosity, and questions in curricular practices. It also suggested using the different mode for engaging the learner like observing, exploring, discovering, analyzing, critical reflection etc. In Patha Bhavana the students get the chance of observing, exploring, discovering, analyzing, critical reflection during their “Prokriti path” class. They observe the trees, birds, and insects. They can tell what the birds eat, how they build the nest if there is any different in nest’s design, is it possible to say the birds’ name by the nest’s design. The students can identify the birds by their tweet, feathers. They are assigned the different type of project. Like, collecting the feathers and labeling it with the name of the respective bird. It is something joyful learning and creative to identify the birds by their feathers. The students are exploring the knowledge at their own. They are constructing the knowledge. In a similar manner, another project work assigned to them is to collect the leaf of different trees and labeling it with the name of the respective tree. In education, different maxims of teaching were followed and one of it is to “proceed from concrete to abstract”. Identifying the birds by their feather or identifying the tree by its leaf is an example of that. The
retention of the knowledge is longer as they construct the knowledge on their own under the guidance of their teacher. The knowledge is not imparted.

Tagore wrote in the preface of his book “Bishyo-porichoy” (the book on science), “sikhsha jara arombho koreche, gonra thekei bigyaner bhandare na ho, bigyaner aanginaai tader probesh kora otyaboshyok. Ei jaigai bigyaner sei prothom porichoy ghotiye deoyar kaje sahityer sahayota swikaar korle tate ogourab kichu nei.” (Translation by the researcher - those who have started education, it is vital to assure their entry at courtyard of science, not to the huge storage of science-related knowledge. There would be no dishonour in accepting the support of literary for the first introduction to science.) There are two aspects of these sentences. One is, Tagore emphasized on less curriculum at the beginning of science education. In case of science education, NCF 2005 also had the similar suggestion for elementary level. Secondly, Tagore claimed that there is no harm in taking support or help of other subjects in teaching and learning science. We have seen that NCF 2005 also has the similar kind of suggestion that is connecting knowledge across the disciplinary boundaries. In Tagore’s school, the Bengali class helps the students to reach the threshold of science through the book “Sahaj Path”. The different parts of “Sahaj path” are taught in different class from i to iv. After analyzing the content it was found that different lesson at different grade is teaching science indirectly. Like, in class I , the lesson- “bone thake bagh/gache thake pakhi/ jole thake mach/dale ache fol/pakhi fol khai” (translation- tigers live in the forest/ birds live in the tree/ fish lives in water/ fruits are there on the branches of trees/ birds eat fruits) and the lesson- “amader choto nodi chole banke banke/ baishakh mase taar hatujol thake... ashare baadol name/ nadi bhoro-bhoro” (translation-our small river runs/ in summer it has less water..in rainy season there is continuous rail/ the rivers are filled with water .) For grade one, you cannot think of hardcore science-related
knowledge but these pieces of information pave the way towards science. In the fifth lesson of the second part of the book Sahaj path, we get the description of the rainy season and its impact on the environment. In the third part of Sahaj Path which is used as Bengali textbook for class three we get some article which are specifically on nature, climate, life of a tree and animal, like- “shishir, kuyasha, megh o bristi” (here what is dew, fog, cloud and rain- has been described along with how they form), “borofer desh” ( here the climate of the arctic region, the animals and human live there along with their struggle for life are described in simple language), “gacher beej ki kore chorai” (here the different mechanism adopted by different trees for spreading its seed is described in simple language). There is another beautiful article on the different breed of dog and their nature. In the similar fashion, some article specifically related to science and scientific knowledge could be found in the fourth part of Sahajpath which is used for grade four in Patha Bhavana. One of them is “udvid rajyo” which describes the importance of plant and trees in human life and environment. Another article is on convection current and its effect. It can be said that these Bengali classes not only help the students to learn Bengali but also pave the path for entering the world of science by arising their curiosity through different articles.

Further NCF 2005 suggested that to utilize different human resources for educating the child by providing them comprehensive knowledge on any subject. Tagore always tried to bring educated and knowledgeable person from the different corner of India and the world. Patha Bhavana is carrying the same legacy. It welcomes the different resource person in school. They are from various backgrounds. Their knowledge helps to inculcate scientific temper and curiosity towards science. As for example, in a seminar talk, a scientist (who is also an ex-student of Visva Bharati) shared his experience in the Arctic region with showing the pictures and video. One workshop was arranged where a
teacher from outside showed different experiment using the materials we use daily. This kind program encourages the students toward science. They are encouraged to prepare small machine and model by their teachers. Recently, the school has started to exhibit their work by organizing an annual science exhibition which further motivated them to engage themselves in exploring scientific knowledge.

**Conclusion**

NCF 2005 observed that “at the primary stage, the child should be engaged in joyfully exploring the world around and harmonizing with it. The objectives at this stage are to nurture the curiosity of the child about the world (natural environment, artifacts, and people), to have the child engage in exploratory and hands-on activities for acquiring the basic cognitive and psychomotor skills through observation, classification, inference...” Patha Bhavana, the school based on Rabindranath Tagore’s educational philosophy, also do the same thing from its starting days for educating science to the students at the primary stage. The open-air school and classes like “Prokriti Path” help the child to explore the world on his own. It engages them in observing, analyzing the nature by living in it. They learn about the trees, the insects, the flower not by seeing the picture in the textbook. They learn about these by seeing the original one. The project like collecting leaf and feathers provide them to gain the knowledge through the hands-on activities. The arrangement of different kind of co-curricular activities like science exhibition, participating in various programs like festivals to celebrate various seasons, planting trees (brikkho ropon) and agriculture (holkarshon) helps to understand the importance of nature, environment and different source of energy in humans’ life. As per the modern neuroscience, more the arrangement of various types of learning experience more is the learning and it cultivates more curiosity, attention, and creativity in the child. A human mind is most vigorous, refresh, alert and malleable at childhood
Thus it is the best time to cultivate the curiosity and creativity and positive attitude towards science by providing the variety of learning experience. NCF 2005 also asked for providing the variety of experience to the students. Hence it can be concluded that Rabindranath Tagore’s educational philosophy followed by the school established by him for science education is significant. The major suggestions provided by the latest curriculum framework i.e. NCF 2005 for science education, are nothing but the reflection of what he had thought a long decade ago and still followed by the school Patha Bhavana. His belief in providing freedom, democratic learning atmosphere, joyful learning, harmony with nature and adapting un-conventional approach, the arrangement of the variety of learning experience, correlating science with other subjects get the support from modern neuroscience also.

References-

Paper-6
Presenting a Model for Developing of Faculty Trust Culture

Mahmood Safari
Nader Soleimani
Presenting a Model for Developing of Faculty Trust Culture

Mahmood Safari\(^{18}\)

Nader Soleimani\(^{19}\)

Abstract

Previous research results showed that the faculty trust culture facilitates collaboration, school health, student achievement, and school effectiveness. The purpose of this study was to identify the factors that make and develop the faculty trust culture in Tehran schools in the school year of 2017-2018. This study was carried out in a qualitative method of a phenomenological type. The sample included 30 experts who were purposefully selected. We interviewed them with semi-structured questions so that the data gathered based on theoretical saturation. The “NVivo 10” software used to analyze the data. Findings of this study indicated that four factors play the most role in the teachers' trust culture in schools. These factors are: "constructive interactions" was in the first place, "awareness" in the second place, "moral characteristics" in the third place, "enabling structure" in the fourth place. Therefore, all the identified factors in the model must be developed in a coordinated way to grow the culture of trust in schools.

Key Words: Faculty Trust, Qualitative Study, School, Teacher, Trust Culture

Introduction

Education should be a means to empower children and adults alike to become active participants in the transformation of their societies. Learning should also focus on the values, attitudes, and behaviors which enable individuals to learn to

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live together in a world characterized by diversity and pluralism (Unesco, 2018).

One social agency created to enhance the processes of socialization and education is the school; Because the school has the foundation for change in each society to achieve sustainable development (Chang et al. 2011). Man moves the wheels of each community, and he is the one, who does not show anything with himself from his birth, except through education. So achieving every transformation in the society is due to all education processes, which in its essence, the role of the teacher is critical as a smart element of a system in a community (i.e., a classroom). So this teacher has to plan and watch the process of reaction and action of the components in the system for achieving the goals (Eyvazi, 1999).

Therefore, human capital is significant in education and teacher is as one of the most critical factors. The teacher is the leader who creates an environment with his efforts to learn a student, a place for learning the content and correcting and completing his mistaken and incomplete learning. Given the role of teachers in the growth of the dimensions of the existence of children and adolescents and the training of human resources in each society, it would not be exaggerated if we say that teachers are the starting point of any educational transformation. The teachers who are interested, competent, and sympathetic, can transform the faces of educational organizations (Pour Sayyad, 1997).

All of us [humans] have a set of belief systems that have structured our world, meaning our experiences, and we will be confused and wandering without them. Some beliefs are dynamic self and have the potential to change. These beliefs encourage us to seek to correct and optimize deficiencies and resolve them and solve our problems and help us to be decisive. These beliefs also integrate our motivational system and strongly influence the goal setting, resistance, and continuous activity to achieve the goals (Davick, 2000; quoted by Amiri, 2007).
Therefore, one of these attitudes is to rely on teachers' trust in students and their parents, which can be the basis for academic success and student achievement. Trust is seen as a phenomenon which affects school life, and within the school effects tradition, antecedents and consequences for students of teacher trust have recently been put on the research agenda (Van Maele et al., 2014; Dewulf et al., 2016). Improving trust in schools where there is a higher concentration of lower SES students could play a determining role in enhancing educational equity. When teachers have a high level of trust in their students, the level of social capital on which students can draw within their educational context increases. Teachers' trust in their students might be regarded as a form of teacher-based social capital available to students (Van Maele & Van Houtte, 2014; Dewulf et al., 2016). As such, trust lies at the heart of a strong relationship between student and teacher and helps children to learn and to achieve success in education.

Therefore, school culture can be mapped regarding faculty trust, the collectively shared beliefs of teachers. Trust is a little like air; no one thinks much about it until it is needed and it is not there. Yet trust in schools is important because it facilitates cooperation (Tschannen-Moran, 2001); it enhances openness (Hoffman, Sabo, Bliss, and Hoy, 1994); it promotes group cohesiveness (Zand, 1997); it supports professionalism (Tschannen ·Moran, 2009); it builds organizational capacity and it improves student achievement (Goddard, Tschannen, Moran, and Hoy, 2001; Hoy, 2002; Bryk and Schneider, 2002; Tschannen, Moran, 2004; Cybulski, Hoy, and Sweetland, 2005; quoted by Hoy & Miskel, 2013). Everyone wants to trust and be trusted. But trust means many things (Hoy and Miskel, 2013). But the problem was that there was no clear picture of the current status of teachers’ trust in students and their parents in Tehran schools (Elementary, Secondary, and High Schools), the factors influencing the development of teachers' trust culture were not known, and there
was no model for developing teachers’ trust in schools. But since this research attempted to determine the current status of teachers' trust culture, to identify the factors affecting the development of teachers’ trust culture and to present a model for the development of this culture, the study was of great importance.

**Background research**

In the past several decades, issues of trust have emerged as central to the discussion about the future of education. Anecdotes of incompetent practices are used to bolster accusations of educational decline, while teachers complain that a misinformed public makes them into scapegoats for social forces beyond their control (Karen, 2007). Dewulf et al., (2017) found that teachers’ trust in their students was to be a key factor relating to learning growth in reading comprehension, and mediated the relationship between the level of ethnic diversity in the class and learning growth. Teachers with a higher level of trust in their students seem to foster more learning growth in reading comprehension.

Safari and Soleimani (2016) found that there was a positive and significant relationship between faculty trust and student achievement. And also the results of their research indicated that the level of teachers' trust was lower than average and was undesirable in secondary schools.

Mirkamali et al. (2015) found that there was a positive and significant relationship between teachers' trust and enabling structure in Tehran schools. And also their study showed that the level of faculty trust is lower than the average and it is not desirable in the elementary schools.

Morshedi Rad (2013) in his study found that there was no meaningful relationship between the managers’ trust and the academic achievement of the students, while there is a positive and significant relationship between the teachers' trust in students and their parents and student achievement.
Malele and Houtte (2012) in their research found that there was no meaningful relationship between faculty trust and the job satisfaction of teachers, while the quality of teachers' social relationships increased their job satisfaction at the workplace.

Zahed-Babelan and Moenikia (2010) found that school health was positively and significantly related to faculty trust, and each separate dimension of health correlated with each aspect of faculty trust in their study.

Goddard et al. (2001) found that teacher trust was a positive predictor of student achievement. Teachers' trust in other school members (students, other teachers, administration, etc.) contributes to students' success, and a trusting environment for students fosters their performance on achievement tests (Van Maele et al., 2014; Dewulf et al., 2017). Principal influence, consideration, morale, and academic emphasis anticipate overall faculty trust.

Hoy et al. (2002) found that collegial leadership of the principal and professional teacher behavior would also positively influence trust in clients. Hoy et al., (1992) figured out that supportive principal leadership produced collegiality and trust in principals but not in colleagues. Teacher trust in colleagues explained effectiveness in schools.

**Research questions**-

1. How is the situation of faculty trust culture in schools?
2. What are the development factors of faculty trust culture in schools?
3. What is the appropriate model for faculty trust culture in schools?

**Method**-

This research is practical regarding the purpose and qualitative regarding the way of implementation. The purpose of this study was to identify the factors that make and develop the culture of faculty trust in schools in the school year 2017-2018 (Elementary, Secondary, and High Schools). This study was carried out in a qualitative method of a phenomenological type. In this study, the
sample included 30 experts who were purposefully selected. We interviewed them with semi-structured questions (the main issues were; A. What’s the definition of trust? B. How is the current status of faculty trust in schools? C. What are the developing factors in faculty trust?), and so that the data gathered based on "theoretical saturation." The "NVivo 10" software used to analyze the data, open source, axial and selective coding.

**Findings**

1. **How is the situation of faculty trust culture in schools?**

**Table 1: Situation of faculty trust culture in Tehran Schools**

<table>
<thead>
<tr>
<th>Element</th>
<th>Faculty Trust</th>
<th>Frequency</th>
<th>Frequency Percentage</th>
<th>Current Status</th>
</tr>
</thead>
<tbody>
<tr>
<td>Case 4</td>
<td>“Because there is little interaction between teachers and the students, and their parents about academic achievement, I suppose, the state of trust is not satisfactory.”</td>
<td>30</td>
<td>80%</td>
<td>Unsatisfactory</td>
</tr>
<tr>
<td>Case 11</td>
<td>“I think that the culture of trust is different in social contexts because there is no intellectual and emotional connection among common goals with a common language, it can</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
be concluded that the teacher's trust culture is not desirable.”

| Total | 24   | 100 |

As Table 1 shows, 24 experts (80%) believe that the current state of trust culture in schools is not satisfactory. It suggests that officials have ignored this issue, while it needs special attention; The teachers engage with the thoughts of children, teens, and youth. They should be able to work well in education. It is imperative that the education authorities take care of everything so teachers can develop the trust culture in schools. The future of every society related to all its teachers; They are the future makers of each community.

2) What are the development factors of faculty trust culture in schools?

**Table 2: Developing factors of faculty trust culture**

<table>
<thead>
<tr>
<th>Component</th>
<th>Factors</th>
</tr>
</thead>
<tbody>
<tr>
<td>Faculty Trust</td>
<td>• Constructive Interactions</td>
</tr>
<tr>
<td></td>
<td>• Awareness</td>
</tr>
<tr>
<td></td>
<td>• Moral Characteristics</td>
</tr>
<tr>
<td></td>
<td>• Enabling Structures</td>
</tr>
</tbody>
</table>

As Table 2 shows, there are four factors that make and develop the teachers’ trust culture in schools, so they are: “Constructive Interactions” in the first place, “Awareness” in the second rank, “Moral Characteristics” in the third place, and “Enabling Structures” is in the fourth place.

Now we explain each of them:

**Table 3: First developing factor of faculty trust culture**

| Case 1 | “We can develop the teachers’ trust in students and their parents

through formal/informal useful interactions.”

| Case 10 | “If created, friendship and intimacy between teachers and students and their parents, faculty trust will improve.” |

As Table 3 shows, the first important factor in building trust culture is constructive interactions. Since trust is rooted in relationships, trust never exists without communication. Therefore, principals and educational leaders need to provide a platform for families to communicate safely and calmly with teachers, so they can understand each other better and work together to grow their children's academic achievements; Because of the more constructive interaction among teachers, students, and their parents, the greater faculty trust.

**Table 4: the Second developing factor of faculty trust culture**

<table>
<thead>
<tr>
<th>***</th>
<th>Awareness</th>
</tr>
</thead>
<tbody>
<tr>
<td>Case 3</td>
<td>“If the families <strong>know</strong> the children's teachers and their abilities and skills, they will trust them more and more.”</td>
</tr>
<tr>
<td>Case 8</td>
<td>“<strong>Awareness</strong> is required to be trusted.”</td>
</tr>
</tbody>
</table>

As Table 4 shows, the second crucial developing factor of faculty trust culture is "awareness”; Because after communicating, trust has no meaning without awareness. Then, if the knowledge is more, it will help to be trusted more comfortable and wiser. Therefore, the school administrator should try to explain and discuss the teachers' abilities, sacrifices, and compassion that are away from the eyes of the students and their parents.

**Table 5: a Third developing factor of faculty trust culture**

<table>
<thead>
<tr>
<th>***</th>
<th>Moral Characteristics</th>
</tr>
</thead>
<tbody>
<tr>
<td>Case 8</td>
<td>“We can make trust through &quot;heart-to-heart connection&quot; and enthusiasm.”</td>
</tr>
<tr>
<td>Case 17</td>
<td>“Confidence building takes place through honesty, compassion, benevolence, and secrecy.”</td>
</tr>
</tbody>
</table>
As Table 5 shows, the third crucial developing factor of trust is ethical features. Since we can create the trust through effective communication, both sides of the relationship must have moral characteristics; because we won't have connection without any respect for morality, honesty, secrecy, compassion, goodwill, and reliability. Therefore, as the two sides have more appropriate moral characteristics, confidence building, we will surely be more confident.

**Table 6: a Fourth developing factor of faculty trust culture**

<table>
<thead>
<tr>
<th>Case 1</th>
<th><strong>Enabling Structure</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>“If the rules and regulations of the school are facilitator and supportive, and the other hand, teachers work together, the level of faculty trust culture will increase in schools.”</td>
</tr>
</tbody>
</table>

| Case 10 | “I think that if the structure of the school is such that teachers participate in decision-making, not only they will feel responsible, but also the level of the trust culture will increase.” |

As Table 6 shows, the fourth developing factor of building trust is "enabling structure" of schools. Therefore, the educators must develop the rules and regulations by using the teachers' participation in decision-making. Not only it'll guarantee the teachers' performance, but also it will help them to feel important. On the other hand, enabling structure would be a facilitator and support teachers so that they can turn into the opportunity each threat. Whenever an organization supports its staff and takes note of their grunts, it will make and develop teachers' trust. While, today, the structure of education, especially schools structure, neither support teachers, nor encourages teachers to work; because the principals don't have the necessary knowledge and ability to formulate enabling rules and regulations in schools, they cannot build and develop faculty trust in schools. Therefore, education officials should choose appropriate and powerful principals for leadership in the schools.
3) What is the appropriate model for faculty trust culture in schools?

Figure 1: Faculty Trust Model

Discussion and Conclusion-

As the results of previous research shows, trust culture increases teachers' performance, school effectiveness, student achievement, and teachers' academic success. The researchers tried to identify the factors that make and develop faculty trust culture in schools, so they studied them to provide the basis for the creation and development of this culture in schools. And since the main purpose of this research is to identify the developing factors of faculty trust culture in schools, there are three basic questions: Firstly, how is the situation of trust culture in schools? Secondly, what do the factors create the culture of trust in schools? And finally, what is the appropriate model of teachers' trust culture based on the identified factors? The first finding of this research based on the
views of the educational experts revealed that the trust culture in Tehran schools is undesirable, while it has a positive and significant relationship with student achievement. The findings of this study were consistent with the findings of Safari and Soleimani study (2016), Mirkamali et al. research (2015), and MorshiRad study (2013); since all of these findings showed that the level of faculty trust culture is low in schools. Since the situation of education in the country is such that for a variety of reasons, teachers have lost their motivation in teaching and learning process which is the core of the school, and they are discouraged.

On the other hand, the social status of teachers has damaged. They are suffering from the discrimination. They are severely dissatisfied. Therefore, it is expected that the executive system should consider the teachers' concerns and encourage them in their work environment to make and promote the faculty trust culture in the unsuitable environments in schools. The second finding of this study showed that four important factors could make and develop faculty trust culture in schools if the top managers of administrative system consider these factors carefully. The first important factor refers to teachers' useful interactions. If the teachers only think about their students' academic achievement, they will move toward the progress of the learners, but unfortunately, the teachers have different problems that they cannot think about their students' worries, so they can't think about the students' needs.

On the other hand, the education system should provide an opportunity for teachers as their duty to spend the time with the students and their parents and have mutual engagement with them. The second factor is related to the "awareness." If the teachers can present their prominent activities and abilities and share them with the students and their families, the necessary knowledge and consciousness will reveal among them. Therefore, they can trust each other, and they can make and develop trust culture in the schools. The third factor that
can be the source of trust building in schools refers to the teachers' ethical characteristics; Since the trust is rooted in relationships, the trust will never maintain without honesty, benevolence, altruism, self-sacrifice, and so on. The fourth important factor refers to enabling structure of school, so that officials support financially and empowers school administrators to develop school rules and regulations that also these rules support the teachers and facilitate their work, so the principals can support the teachers and make the conditions for them that they can promote student achievement with their colleagues, students and their parents with the knowledge and ability to eliminate the barriers to trust and develop it by spending time, great thought and effort collectively.

Finally, when education system can be more dynamic and effective which it'll be the top priority for all education officials, then one can expect that the high cost of police, courts, and prisons will be less and less of a day; Because the schools are the epicenters of the society, the officials should consider the schools. If they neglect about them, they will see a lot of problems in the community. In the end, educational planners can use the proposed model (Figure 1) to further enhance the effectiveness of schools and the academic achievement of students.

**Suggested Solutions**-

1. Since the present situation of the trust culture is “unsatisfactory” in the schools, officials should take special care.

2. According to the “*Constructive Interactions*” factor, the relationship between home and school should be further enhanced.

3. Given the “*awareness*” factor, teachers, principals, and parents should participate in individual empowerment workshops to provide a framework for developing trust culture in schools.

4. Based on the “*Enabling Structures*” factor, authorities should formulate the rules and regulations that facilitate the process of doing things at school.
5. Due to the “Moral Characteristics” factor, teachers should be encouraged and featured by their moral qualities at a special ceremony.

Acknowledgments-
The authors are grateful to those people who took part in this study.

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