CHAPTER – VI

FINDINGS AND CONCLUSIONS
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6.1 Introduction
Teaching Learning System is a complex procedure. The present study reveals to highlight different aspects of teaching learning system with the following dimensions:
1) Gathering information by collecting data for understanding the present situation of teaching learning system of West Bengal.
2) Suggested model of Teaching Learning System from reviews.
3) Find out components of Teaching Learning System.
4) Experimentation to finalize the Teaching Learning Model.

A holistic approach has been used to identify the effectiveness of the system to investigate the components and the mechanism of the system to have its better results. We consider three compartments namely effective teaching, effective school, and effective leadership for ensuring effectiveness in teaching learning system. The study is interdisciplinary relevant as because the present output based education system is rooted from the components from various discipline mentioned above involving professionalized educational system and human rights in education too reflected through the following teaching learning model.

6.2 Objectives of the Study
1. To study the Effective Teaching Learning System in Life Science from some selected secondary level schools in West Bengal.
2. To apply a standardize questionnaire regarding effective Teaching Learning System.
3. To find out the components of Effective Teaching Learning System in Life Science.
4. To determine factors relevant for Effective Teaching Learning System.
5. To find out the mechanism of Effective Teaching Learning System.
6.3 Methodology

The study is survey type descriptive research followed by Experimental research and the approach is mixed type of research. For finding out the components of the Teaching Learning system statistically Factorial analysis has been conducted with other descriptive statistics.

6.4 Tools

A standardized Questionnaire of Dr. D. Bhattacharyya and A. K. Hazra regarding Effective Teaching Learning System has been used for conducting the study and it has been locally further standardized before application.

6.5 Population and Sample

Ninth grade students of West Bengal have been considered as population and some selected schools are used as sample for conducting the study. Sampling technique is purposive in nature. Total sample size is 100 taken from different schools representing different parts of West Bengal.

6.6 Significance of the Study

A holistic approach has been suggested for explaining the Effective Teaching Learning System. Mostly we are talking about the effective teaching or sometimes effective school or effective management or administration etc. but what is our observation is that one variable is highly related to another or summation of all the variables makes the system. Therefore we are interested to develop the system as a whole and try to prescribe for better school. We should have an effective system not only a single dimension but in the plural way crystallizing the system to produce maximum output.

- The output of the system is dependent on its effectiveness. Effectiveness of a system is therefore a professionalized pattern relevant to the present day teaching learning scenario.
- In developing countries like India, system approach is very much significant in
controlling the quantity and quality ratio; as well it accelerates the quality of education in the present globalized system.

The complexity of Teaching & Learning cannot be removed by mere technology as numerable components are interrelated and interdependent on it. Therefore an alternative may be focused through this approach with the help of technology and humanizing the system too.

6.7 Significant Components Extracted From Factor Analysis

<table>
<thead>
<tr>
<th>Components Extracted</th>
<th>Effective Leadership</th>
</tr>
</thead>
<tbody>
<tr>
<td>6</td>
<td>Emphasis on culture of teachers’ leadership is rare in our school.</td>
</tr>
<tr>
<td>8</td>
<td>Effective leadership change culture of school to invite parent involvement.</td>
</tr>
<tr>
<td>27</td>
<td>Effective leadership act as a community leader in our school.</td>
</tr>
<tr>
<td>10</td>
<td>Effective leadership manage time effectively in our school.</td>
</tr>
<tr>
<td>15</td>
<td>Effective leadership develop safe and trustful relationship with teachers, students and parents.</td>
</tr>
<tr>
<td>20</td>
<td>Effective Leadership develop school improvement plans from results of inquiry and reflection.</td>
</tr>
<tr>
<td>3</td>
<td>Emphasis on moral courage (code of ethics / integrity) is given to the students by the management to exhibit honesty.</td>
</tr>
<tr>
<td>14</td>
<td>Effective leadership create organisational structure that involve all faculty in decision making for collaboration.</td>
</tr>
</tbody>
</table>
### Effective School

<table>
<thead>
<tr>
<th>Components Extracted</th>
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<tbody>
<tr>
<td>4</td>
<td>High expectations and clear consequences are articulated to students frequently for effective school.</td>
</tr>
<tr>
<td>5</td>
<td>Staff is dedicated and caring for effective school.</td>
</tr>
<tr>
<td>2</td>
<td>Class size and student population are small to make a school effective.</td>
</tr>
<tr>
<td>8</td>
<td>Effective schools deploy their resources strategically to enhance teaching and learning:</td>
</tr>
<tr>
<td>1</td>
<td>In effective school, teachers engage students by good teaching</td>
</tr>
<tr>
<td>7</td>
<td>In effective school size, respect and collaboration create a sense of family and community within its walls.</td>
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</tbody>
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### Effective Teaching

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<tbody>
<tr>
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<td>Effective teaching depends on positive classroom environment that does not allow sleeping, talking, doing other work, phone calls etc.</td>
</tr>
<tr>
<td>13</td>
<td>Effective teaching depends on equity pedagogy</td>
</tr>
<tr>
<td>10</td>
<td>Plan for periodic rest to avoid mental fatigue is the part of effective teaching.</td>
</tr>
<tr>
<td>1</td>
<td>In effective teaching it is necessary to break the class period into two or three different activities.</td>
</tr>
</tbody>
</table>

### 6.8 Findings

1. **In effective school, teachers engage students by good teaching**

   **Interpretation:** Table 1 shows that the value of $\chi^2$ was found to be 60.20 which is greater than the table value. Hence, the result is significant at 0.05 level, Therefore, the statement is accepted.

2. **Class size and student population are small to make a school effective**

   **Interpretation:** Table 2 shows that the value of $\chi^2$ (calculated) is 51.80 which is
greater than the table value. Hence, the result is significant at 0.05 level. Therefore, the statement is accepted. It means that System improves the teaching learning process.

3. **In an effective school ground rules are for respectful behaviour**
   **Interpretation**: Table 3 shows that the value of $\chi^2$ (calculated) is 40.66 which is greater than the table value and the result is significant at 0.05 level. Therefore, the statement is accepted.

4. **High expectations and clear consequences are articulated to students frequently for effective school**
   **Interpretation**: Table 4 shows that the value of $\chi^2$ (calculated) is 54.20 which is greater than the table value and the result is significant at 0.05 level.

5. **Staff is dedicated and caring for effective school**
   **Interpretation**: Table 5 shows that the value of $\chi^2$ was found 30.66 which is greater than the table value and the result is significant at 0.05 level. Therefore, the statement is accepted.

6. **Structured classroom routines provide stability and direction for effective school**
   **Interpretation**: Table 6 shows that the value of $\chi^2$ was found 33.80 which is greater than the table value and the result is significant at 0.05 level. Therefore, the statement is accepted.

7. **In effective school size, respect and collaboration create a sense of family and community within its walls**
   **Interpretation**: Table 7 shows that the value of $\chi^2$ came to 57.06 when calculated which is greater than the table value and the result is significant at 0.05 level. Therefore, the statement is accepted.
8. Effective schools consider time spent on academic and non-academic learning

**Interpretation:** Table 8 shows that the value of \( \chi^2 \) when calculated came to 11.16 which is greater than the table value and the result is significant at 0.05 level. Therefore, the statement is accepted.

9. Effective schools deploy their resources strategically to enhance teaching and learning

**Interpretation:** Table 9 shows that the value of \( \chi^2 \) (calculated) was found 51.46 which is greater than the table value and the result is significant at 0.05 level. Therefore, the statement is accepted.

10. Balance of workload i.e. time focused on T/L & time spent on administrative tasks is maintained in effective school

**Interpretation:** Table 10 shows that the value of \( \chi^2 \) (calculated) is 30.20 which is greater than the table value and the result is significant at 0.05 level. Therefore, the statement is accepted.

11. Strategy for planning and implementing pedagogical change

**Interpretation:** Table 11 shows that the value of \( \chi^2 \) (calculated) is 35.00 which is greater than the table value and the result is significant at 0.05 level. Therefore, the statement is accepted.

12. In effective school provision of knowledge bank with best practices and new ideas are maintained

**Interpretation:** Table 12 shows that the value of \( \chi^2 \) was found to be 40.30 which is greater than the table value and the result is significant at 0.05 level. Therefore the statement is accepted.
13. Assessment and Reporting practices are integral to the T/L process in effective school
**Interpretation:** Table 13 shows that the value of $\chi^2$ was found 40.66 which is greater than the table value and the result is significant at 0.05 level. Therefore, the statement is accepted.

14. In effective school, student resource package provides focus on student needs, encourages innovation, targeting funds for them
**Interpretation:** Table 14 shows that the value of $\chi^2$ (calculated) is 51.46 which is greater than the table value and the result is significant at 0.05 level. Therefore, the statement is accepted. It can be concluded that curriculum do not satisfy the whole objectives.

15. In effective school, staff, student and parent surveys provide feedback to teachers and school leadership teams on T/L arrangements
**Interpretation:** Table 15 shows that the value of $\chi^2$ (calculated) is 21.80 which is greater than the table value and the result is significant at 0.05 level. Therefore, the statement is accepted.

16. Effective school manages the time spent on interdisciplinary learning – a) physical, personal & social learning and b) discipline-based learning
**Interpretation:** Table 16 shows that the value of $\chi^2$ (calculated) is 40.30 which is greater than the table value and the result is significant at 0.05 level. Therefore, the statement is accepted.

17. Effective school frames good curriculum planning which support councils, leaders and teachers to work cohesively
**Interpretation:** Table 17 shows that the value of $\chi^2$ (calculated) is 50.40 which is greater than the table value and the result is significant at 0.05 level. Therefore, the statement is accepted.
18. In effective teaching it is necessary to break the class period into two or three different activities

**Interpretation:** Table 18 shows that the value of $\chi^2$ (calculated) is 55.96 which is greater than the table value and the result is significant at 0.05 level. Therefore, the statement is accepted.

19. Effective teaching specify the class lesson objectives and to teach those objectives directly

**Interpretation:** Table 19 shows that the value of $\chi^2$ (calculated) is 15.00 which is greater than the table value and the result is significant at 0.05 level. Therefore, the statement is accepted.

20. Effective teaching is enhanced by challenging class-room climate but not threatening to students

**Interpretation:** Table 20 shows that the value of $\chi^2$ (calculated) is 51.80 which is greater than the table value and the result is significant at 0.05 level. Therefore, the statement is accepted.

21. Effective teaching depends on positive classroom environment that does not allow sleeping, talking, doing other work, phone calls etc.

**Interpretation:** Table 21 shows that the value of $\chi^2$ (calculated) is 35.00 which is greater than the table value and the result is significant at 0.05 level. Therefore, the statement is accepted.

22. Effective teaching depends upon the class-size

**Interpretation:** Table 22 shows that the value of $\chi^2$ (calculated) is 36.20 which is greater than the table value and the result is significant at 0.05 level. Therefore, the statement is accepted.
23. Effective teaching involves all the stakeholders (teachers, support staff, students, parents, governors, partner school and multi-agency groups that work with the school) to establish priorities for improvement

Interpretation: Table 23 shows that the value of $\chi^2$ (calculated) is 32.60 which is greater than the table value and the result is significant at 0.05 level. Therefore, the statement is accepted.

24. It is logical to give authority to all the staff to make decision for innovative and creativity of school

Interpretation: Table 24 shows that the value of $\chi^2$ (calculated) is 28.56 which is greater than the table value and the result is significant at 0.05 level. Therefore, the statement is accepted.

25. Return demonstration by the students is the chance to be creative – promotes learning and as a whole highlights effective teaching

Interpretation: Table 25 shows that the value of $\chi^2$ (calculated) is 24.56 which is greater than the table value and the result is significant at 0.05 level. Therefore, the statement is accepted.

26. Effective teaching is a path of evolution from “simple, old known, prior knowledge to complex and new unknown information – the way of quick grasping by the students

Interpretation: Table 26 shows that the value of $\chi^2$ (calculated) is 12.20 which is greater than the table value and the result is significant at 0.05 level. Therefore, the statement is accepted.

27. Plan for periodic rest to avoid mental fatigue is the part of effective teaching

Interpretation: Table 27 shows that the value of $\chi^2$ (calculated) is 10.96 which is greater than the table value and the result is significant at 0.05 level. Therefore, the statement is accepted.
28. Effective teaching is “praising students’ success” as it associate the desired learning goal

**Interpretation:** Table 28 shows that the value of $\chi^2$ (calculated) is 37.56 which is greater than the table value and the result is significant at 0.05 level. Therefore, the statement is accepted.

29. Effective teaching depends on students’ ratings, peer review, self evaluation, teaching portfolios and student achievement

**Interpretation:** Table 29 shows that the value of $\chi^2$ (calculated) is 27.96 which is greater than the table value and the result is significant at 0.05 level. Therefore, the statement is accepted.

30. Effective teaching depends on equity pedagogy

**Interpretation:** Table 30 shows that the value of $\chi^2$ (calculated) is 40.20 which is greater than the table value and the result is significant at 0.05 level. Therefore, the statement is accepted.

31. Effective teaching depends on teacher’s awareness of the cultural differences in the students – to maintain order in the classroom

**Interpretation:** Table 31 shows that the value of $\chi^2$ (calculated) is 27.96 which is greater than the table value and the result is significant at 0.05 level. Therefore, the statement is accepted.

32. Effective leadership develops a well defined vision with staff in our school

**Interpretation:** Table 32 shows that the value of $\chi^2$ (calculated) is 49.66 which is greater than the table value and the result is significant at 0.05 level. Therefore, the statement is accepted.
33. Effective Leadership focuses on both instructional and facilitative leadership in our T/L situation

Interpretation: Table 33 shows that the value of $\chi^2$ (calculated) is 48.80 which is greater than the table value and the result is significant at 0.05 level. Therefore, the statement is accepted.

34. Emphasis on moral courage (code of ethics / integrity) is given to the students by the management to exhibit honesty

Interpretation: Table 34 shows that the value of $\chi^2$ (calculated) is 45.60 which is greater than the table value and the result is significant at 0.05 level. Therefore, the statement is accepted.

35. Effective Leadership build a collaborative culture in our school

Interpretation: Table 35 shows that the value of $\chi^2$ (calculated) is 46.26 which is greater than the table value and the result is significant at 0.05 level. Therefore, the statement is accepted.

36. Effective Leadership empower teachers in decision making for all round improvement of school

Interpretation: Table 36 shows that the value of $\chi^2$ (calculated) is 55.40 which is greater than the table value and the result is significant at 0.05 level. Therefore, the statement is accepted.

37. Emphasis on culture of teachers’ leadership is rare in our school

Interpretation: Table 37 shows that the value of $\chi^2$ (calculated) is 51.80 which is greater than the table value and the result is significant at 0.05 level. Therefore, the statement is accepted.

38. Climate of mutual trust and respect is very common criteria of our school

Interpretation: Table 38 shows that the value of $\chi^2$ (calculated) is 35.00 which is
greater than the table value and the result is significant at 0.05 level. Therefore, the statement is accepted.

39. Effective leadership change culture of school to invite parent involvement
Interpretation: Table 39 shows that the value of $\chi^2$ (calculated) is 31.93 which is greater than the table value and the result is significant at 0.05 level. Therefore, the statement is accepted.

40. Symbol of success is the point of pride – reflected by test-scores in our school
Interpretation: Table 40 shows that the value of $\chi^2$ (calculated) is 21.80 which is greater than the table value and the result is significant at 0.05 level. Therefore, the statement is accepted.

41. Effective leadership manage time effectively in our school
Interpretation: Table 41 shows that the value of $\chi^2$ (calculated) is 89.60 which is greater than the table value and the result is significant at 0.05 level. Therefore, the statement is accepted. It means that academic achievement measures only cognitive domain.

42. Effective Leadership arrange parent / staff meetings effectively for improvement of our school
Interpretation: Table 42 shows that the value of $\chi^2$ (calculated) is 83.46 which is greater than the table value and the result is significant at 0.05 level. Therefore, the statement is accepted exposing visual styles.

43. Effective Leadership try to balance the workload among the staff
Interpretation: Table 43 shows that the value of $\chi^2$ (calculated) is 14.60 which is greater than the table value and the result is significant at 0.05 level. Therefore, the statement is accepted.
44. Effective Leadership develop relations with teachers

Interpretation: Table 44 shows that the value of $\chi^2$ (calculated) is 58.20 which is greater than the table value and the result is significant at 0.05 level. Therefore, the statement is accepted.

45. Effective Leadership create organisational structure that involve all faculty in decision making for collaboration

Interpretation: Table 45 shows that the value of $\chi^2$ (calculated) is 15.80 which is greater than the table value and the result is significant at 0.05 level. Therefore, the statement is accepted.

46. In our school leadership develop safe & trustful relationship with teacher, students and parents

Interpretation: Table 46 shows that the value of $\chi^2$ (calculated) is 18.20 which is greater than the table value and the result is significant at 0.05 level. Therefore, the statement is accepted. In the opinion of the majority is that visual learning style more preferable.

47. In our school, leadership cultivate the academic field to choose leader from the rank of teacher

Interpretation: Table 47 shows that the value of $\chi^2$ (calculated) is 39.20 which is greater than the table value and the result is significant at 0.05 level. Therefore, the statement is accepted.

48. Leadership help teachers deal with increased parental involvement

Interpretation: Table 48 shows that the value of $\chi^2$ (calculated) is 27.80 which is greater than the table value and the result is significant at 0.05 level. Therefore, the statement is accepted.
49. A focus on student learning is always established by leadership in our school
Interpretation: Table 49 shows that the value of $\chi^2$ (calculated) is 83.16 which is greater than the table value and the result is significant at 0.05 level. Therefore, the statement is accepted.

50. Careful monitoring of teacher and pupil progress is encouraged by leadership
Interpretation: Table 50 shows that the value of $\chi^2$ (calculated) is 63.20 which is greater than the table value and the result is significant at 0.05 level. Therefore, the statement is accepted.

51. Effective Leadership develop school improvement plans from results of inquiry and reflection
Interpretation: Table 51 shows that the value of $\chi^2$ (calculated) is 54.96 which is greater than the table value and the result is significant at 0.05 level. Therefore, the statement is accepted.

52. Communication with all stakeholders is done by leadership with science due to greater vocational opportunity
Interpretation: Table 52 shows that the value of $\chi^2$ (calculated) is 33.76 which is greater than the table value and the result is significant at 0.05 level. Therefore, the statement is accepted.

53. Our leadership always puts attention to the needs of low-performing students
Interpretation: Table 53 shows that the value of $\chi^2$ (calculated) is 58.80 which is greater than the table value and the result is significant at 0.05 level. Therefore, the statement is accepted.
54. Our leadership always disseminate information widely

**Interpretation** : Table 54 shows that the value of $\chi^2$ (calculated) is 33.80 which is greater than the table value and the result is significant at 0.05 level. Therefore, the statement is accepted. It suggests that information be provided visually.

55. Provision of no role model example is the negative point for effective leadership

**Interpretation** : Table 55 shows that the value of $\chi^2$ (calculated) is 36.46 which is greater than the table value and the result is significant at 0.05 level. Therefore, the statement is accepted.

56. Effective leadership develop effective co-ordination strategies for betterment of our school

**Interpretation** : Table 56 shows that the value of $\chi^2$ (calculated) is 28.96 which is greater than the table value and the result is significant at 0.05 level. Therefore, the statement is accepted.

57. Effective leadership created senior management team in our school

**Interpretation** : Table 57 shows that the value of $\chi^2$ (calculated) is 51.80 which is greater than the table value and the result is significant at 0.05 level. Therefore, the statement is accepted.

58. Effective leadership act as a community leader in our school

**Interpretation** : Table 58 shows that the value of $\chi^2$ (calculated) is 3.76 which is lesser than the table value and the result is not significant at 0.05 level. Therefore, the statement is rejected.

59. Our school leadership is sensitive to exam

**Interpretation** : Table 59 shows that the value of $\chi^2$ (calculated) is 48.80 which is greater than the table value and the result is significant at 0.05 level. Therefore, the statement is accepted.
60. Monitoring of students progress is regularly done by our leadership

**Interpretation :** Table 60 shows that the value of $\chi^2$ (calculated) is 35.00 which is greater than the table value and the result is significant at 0.05 level. Therefore, the statement is accepted.

It is observed that all the information regarding effectiveness of Teaching Learning System are looking positive and satisfying the respondents but simultaneously the Chi-square analysis reveals that the education system of Indian context is to be more potential for modernization and global demands for quality education.

6.9 Mechanism of Effective Teaching Learning System

In Indian context it has been understood from the realistic situation Teaching Learning System should be based on affective domain. Therefore finally for realising Teaching Learning System a humanistic model based on development of Interest has been suggested for Indian context and it was observed that students are performed better in this model than traditional model.

6.10 Conclusion

With the passage of time Indian Teaching Learning System is gradually leading to multidimensional. So it is not very easy to predict which one is the better way. The present research gives a high light which are the ways reflected through its findings.

The research expressed a great difference of Teaching Learning System actually what should be and the reality. Therefore a Teaching Learning Model has been suggested combining affective domain and the humanistic approach for realising students in a better way and anticipating some better output from the Teaching Learning System.