CHAPTER - III

METHODOLOGY

3.0 INTRODUCTION

This chapter contains (1) Statement of the problem (2) Title (3) Objectives (4) Research Hypotheses (5) Assumptions (6) Delimitations (7) Research Strategy (8) Tools used (9) Population and Sample (10) Data collection procedures and (11) Data Analysis.

3.1 STATEMENT OF THE PROBLEM

There has been growing interest in learning processes and support for teaching learners how to learn, and thus become independent and autonomous learners through motivation and the use of learning strategies. Based on social learning theory, it was expected that there would be a significant relationship between Motivation, Self-regulated Learning and Academic Performance. There is considerable number of researches documented on motivation, learning strategies and Academic Performance in foreign countries but not in India. Even though a number of studies are found for the population of college students, no such studies sampled with student teachers could be found in the references anywhere. So the aim of this study was to investigate how student teachers’ Academic Performance
in their undergraduate course can be explained in terms of the Motivated Self-regulated Learning strategies.

Hence, an attempt was made by the investigator to conduct a study on Motivated Self-regulated Learning strategies and Academic Performance of the student teachers.

3.2 TITLE

The problem under investigation is “MOTIVATED SELF-REGULATED LEARNING AND ACADEMIC PERFORMANCE OF THE STUDENT TEACHERS”

3.3 OBJECTIVES OF THE STUDY

The main objectives of the study are

1. To find out the level of the motivation existing among the student teachers.

2. To find out the level of the learning strategies existing among the student teachers.

3. To find out the level of their academic performance.

4. To examine the difference in the levels of Motivated Self-regulated Learning strategies of student teachers with reference to Gender, Age,
Birth place, Subject of study, Management of the institution and Marital status.

5. To examine the difference in their academic performance in respect of Gender, Age, Birth place, Subject of study, Management of the institution and Marital status.

6. To find out the significance of the relationship among the various components of Motivated Self-regulated Learning Strategies.

7. To find out the level of prediction of various components of Motivated Self-regulated Learning Strategy on the academic performance of student teachers.

3.4 HYPOTHESES

1. There is no significant difference between the components of the demographic variables of the student teachers in their Motivated Self-regulated Learning strategies.

2. There is no significant difference between the components of the demographic variables of the student teachers in their motivation.

3. There is no significant difference between the components of the demographic variables of the student teachers in their learning strategies.

4. There is no significant difference between the male and female student teachers in the subscales of Motivated Self-regulated Learning Strategies.
5. There is no significant difference between the different age group of student teachers in the subscales of Motivated Self-regulated Learning Strategies.

6. There is no significant difference between the urban born and rural born student teachers in the subscales of Motivated Self-regulated Learning Strategies.

7. There is no significant difference between the science group and arts group student teachers in the subscales of Motivated Self-regulated Learning Strategies.

8. There is no significant difference between the married and unmarried student teachers in the subscales of Motivated Self-regulated Learning Strategies.

9. There is no significant difference between the male and female student teachers in their Academic Performance.

10. There is no significant difference between the different age group student teachers in their Academic Performance.

11. There is no significant difference between the urban born and rural born student teachers in their Academic Performance.

12. There is no significant difference between the Science group and Arts group student teachers in their Academic Performance.
13. There is no significant difference between the married and unmarried student teachers in their Academic Performance.

14. There is no significant relationship among the Motivated Self-regulated Learning Strategies, motivation and learning strategies of student teachers.

15. There is no significant relationship between the components of Motivated Self-regulated Learning Strategies and its subscales among the student teachers.

16. There is no significant relationship among the subscales of Motivated Self-regulated Learning strategies among the student teachers.

17. There is no significant relationship between the Motivated Self-regulated Learning strategies and the Academic Performance of student teachers.

18. The subscales of Motivated Self-regulated Learning Strategies are the predictors of Academic Performance of the student teachers.

**3.5 ASSUMPTIONS**

The following assumptions were considered for this study.

1. There exists a high level of Motivated Self-regulated Learning Strategies among student teachers.

2. There exists a high level of Academic Performance in the undergraduate course among the student teachers.
3. Demographic factors such as Gender, Age, Place of birth, Subject studied in the undergraduate course and Marital status could be considered in studying the Motivated Self-regulated Learning Strategies.

4. The Motivated Self-regulated Learning Strategies are the predictors for Academic Performance of the student teachers.

3.6 DELIMITATIONS OF THE STUDY

1. The present investigation is confined to only student teachers undergoing the one year B.Ed. course in the select colleges of education.

2. The study is confined to a sample of 500 student teachers.

3. Only selected variables have been taken for the investigation.

3.7 RESEARCH STRATEGY

Motivated Self-regulated Learning is a psychological feeling which is represented by the behaviour and attitude of the man at work. Since direct measurement is not possible, the indirect measurement is possible by checking the extent to which the student is achieving the goal. In other way, it may be measured by indirect factors. Among the methods exist to measure the Motivated Self-regulated Learning, the normative survey method was used for this study since this
method helps to gather / collect data from a relatively large number of cases at a particular time.

3.8 TOOLS USED:

The Motivated Strategies for Learning Questionnaire (MSLQ) developed by Pintrich et al., (1991) was used to assess Motivated Self-regulated Learning strategies among the student teachers. This MSLQ has two dimensions: Motivation and Learning Strategies. The motivation dimension has 6 subscales with 31 statements and the learning strategies dimension has 9 subscales with 50 statements. These subscales are modular and can be used single or together depending on the researchers’ purpose.

The motivation dimension designed to assess students' goals and beliefs for a course, their beliefs about their skills to succeed in a course, and their anxiety about tests in a course. This dimension consists of three general components: Expectancy, Value and Affect. The Expectancy component refers to students’ beliefs that they can accomplish a given task and has two subscales: Self-efficacy and Control of learning beliefs. The self-efficacy subscale incorporates expectancy for success, which is specific to task performance and judgements about one’s ability to accomplish a task and be confident in one’s skills to perform a task. The Control of learning beliefs refers to students’ beliefs that outcomes are contingent
on one’s own effort, rather than external factors like the teacher. The value component refers to the reasons students engage in an academic task. The value subscales are based on both achievement goal theory and expectancy-value theory. There are three subscales in this component: Intrinsic goal orientation (a focus on learning and mastery), Extrinsic goal orientation (a focus on grades and approval from others), and Task value beliefs (students’ judgements of how interesting, useful and important a task is). The third component, Affect, is operationalized by the subscale Test anxiety, which addresses students’ concerns and worries of taking examinations. Thus the motivation dimension has 6 subscales with 31 items.

The learning strategies dimension is with regard to students’ use of different cognitive and meta-cognitive strategies as well as management of various resources. This dimension consists of three components: Cognitive processes, Metacognitive processes and Resource management. The cognitive component comprises of four subscales: Rehearsal, Elaboration, Organization, and Critical thinking. The most basic cognitive subscale is rehearsal and refers to rehearsing materials over and over again to increase the recall of information. The remaining subscales address more complex cognitive strategies like elaboration strategies (e.g., summarizing and integrating information), organizing strategies (e.g., outlining or creating tables or concept maps to better comprehend learning
materials), and critical thinking, which refers to students’ strategies to apply prior knowledge to new contexts or critically evaluate ideas and concepts. The second general component, metacognition, addresses students’ use of strategies to monitor and regulate their cognition. This large subscale includes planning (e.g., setting goals and task analysis), monitoring (e.g., tracking one’s attention, self-testing and questioning), and regulating (i.e., fine-tuning and continuous adjustment of cognitive activities). The third general component is resource management, which includes students’ regulatory strategies to manage resources other than their cognition. These strategies include managing one’s time and study environment (e.g., scheduling, planning and managing one’s study time and setting realistic goals), regulating one’s effort (e.g., willingness to try hard even when work is difficult), peer learning (e.g., working collaboratively with peers on a task), as well as help seeking (e.g., when facing difficulties to identify and approach someone who can provide assistance). Thus the learning strategies dimension has 9 subscales with 50 items.
### TABLE 3.1

**SUBSCALES OF THE MSLQ**

<table>
<thead>
<tr>
<th>Sl.No</th>
<th>MOTIVATION</th>
<th>Items</th>
<th>Sl.No</th>
<th>LEARNING STRATEGIES</th>
<th>Items</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>Intrinsic Goal Orientation</td>
<td>4</td>
<td>1.</td>
<td>Rehearsal</td>
<td>4</td>
</tr>
<tr>
<td>2.</td>
<td>Extrinsic Goal Orientation</td>
<td>4</td>
<td>2.</td>
<td>Elaboration</td>
<td>6</td>
</tr>
<tr>
<td>3.</td>
<td>Task Value</td>
<td>6</td>
<td>3.</td>
<td>Organisation</td>
<td>4</td>
</tr>
<tr>
<td>4.</td>
<td>Control of Learning Beliefs</td>
<td>4</td>
<td>4.</td>
<td>Critical Thinking</td>
<td>5</td>
</tr>
<tr>
<td>5.</td>
<td>Self-efficacy</td>
<td>8</td>
<td>5.</td>
<td>Metacognition</td>
<td>12</td>
</tr>
<tr>
<td>6.</td>
<td>Test Anxiety</td>
<td>5</td>
<td>6.</td>
<td>Study and Time Management</td>
<td>8</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>7.</td>
<td>Effort Regulation</td>
<td>4</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>8.</td>
<td>Peer Learning</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>9.</td>
<td>Help Seeking</td>
<td>4</td>
</tr>
<tr>
<td></td>
<td>Total no. of items</td>
<td>31</td>
<td></td>
<td>Total no. of items</td>
<td>50</td>
</tr>
</tbody>
</table>

A five point continuum was given along with each statement of the tool for the reason that the sample can express their opinions more precisely and accurately by understanding the continuum. The five point continuum is stated in the following lines with the score value as mentioned.
1. means “I never or almost never do this”
2. means “I do this only occasionally”
3. means “I sometimes do this (about 50% of the time)”
4. means “I usually do this”
5. means “I always or almost always do this”

**PILOT STUDY:**

The MSLQ was administered to one hundred student teachers randomly selected from the accessible population. The responses were scored and summed up.

**RELIABILITY:**

The reliability co-efficient was computed for the tool by using split-half method. On application of the Spearman Brown formula, the reliability co-efficient was found to be $r=0.739$ which indicates that the tool had a high degree of reliability.

**VALIDITY:**

The content validity of a test was established by experts’ judgement. Accordingly the tool was given to five experts in the field of teacher education with the request to assess whether the statements focus on the relevant concept. The experts’ opinion showed that the tool has content validity. The Pearson’s co-
efficient of correlation values between scores of components: Value, Expectancy, Affect, Cognition, Metacognition, Resource management and MSLQ to confirm the content validity through item-total correlation analysis.

**TABLE 3.2**

<table>
<thead>
<tr>
<th></th>
<th>Value</th>
<th>Expect</th>
<th>Affect</th>
<th>Cogni</th>
<th>Meta</th>
<th>Resource</th>
<th>MSLQ</th>
</tr>
</thead>
<tbody>
<tr>
<td>Value</td>
<td>1.000</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Expectancy</td>
<td>0.709</td>
<td>1.000</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Affect</td>
<td>0.254</td>
<td>0.274</td>
<td>1.000</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cognition</td>
<td>0.610</td>
<td>0.630</td>
<td>0.328</td>
<td>1.000</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Metacognition</td>
<td>0.419</td>
<td>0.502</td>
<td>0.488</td>
<td>0.625</td>
<td>1.000</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Resource</td>
<td>0.510</td>
<td>0.484</td>
<td>0.523</td>
<td>0.647</td>
<td>0.739</td>
<td>1.000</td>
<td></td>
</tr>
<tr>
<td>MSLQ</td>
<td>0.731</td>
<td>0.753</td>
<td>0.531</td>
<td>0.818</td>
<td>0.760</td>
<td>0.739</td>
<td>1.000</td>
</tr>
</tbody>
</table>

The correlation values were found to be statistically significant at 0.05 level of significance and thus consequently confirmed validity of the statements of the tool.
3.9 POPULATION AND SAMPLE:

All the student teachers undergoing the one year B.Ed. course in the Colleges of Education in Tamilnadu were identified as the target population of this study. However, it is appropriate to define an accessible population since it is not easy to come into contact with this target population. The accessible population was determined as student teachers in Tanjore district of Tamilnadu. This is the population which the results of the study will be generalized.

The population being sampled in this study was 25 colleges of education. A sample of five colleges of education was selected randomly for this study (20% of the accessible population). Accordingly the desired sample size of student teachers was determined as 500 student teachers, which is of the whole population. Of these 500 student teachers, 416 were female and 84 were male.
TABLE 3.3
INSTITUTIONS TAKEN AS SAMPLE

<table>
<thead>
<tr>
<th>Sl. No.</th>
<th>Name of the college</th>
<th>No. of student teachers</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Government College of Education, Orathanadu, Tanjore Dist.</td>
<td>100</td>
</tr>
<tr>
<td>2</td>
<td>School of Education, SRC – SASTRA, Kumbakonam</td>
<td>80</td>
</tr>
<tr>
<td>3</td>
<td>Dr. SRJ College of Education, Tanjore</td>
<td>100</td>
</tr>
<tr>
<td>4</td>
<td>ARR College of Education, Kumbakonam</td>
<td>100</td>
</tr>
<tr>
<td>5</td>
<td>Annai College of Education, Kumbakonam</td>
<td>120</td>
</tr>
</tbody>
</table>

3.10 DATA COLLECTION PROCEDURE

On getting proper permission from the head of the institutions, the investigator collected the data from the student teachers of the sample institutions. The student teachers were given instructions to respond the statements accordingly and were also asked to give the personal data such as Academic Performance, Subject studied in the under graduate course, Gender, Age, Place of birth and Marital status. The investigator checked all statements after they had been filled out to see if any blanks had been left out and for it was essential that all statements were answered and the scale was complete in all aspects.
3.11 SCHEME OF ANALYSIS

This investigator used the following procedure after data collection. The data were subjected to (1) Descriptive Analysis (2) Differential Analysis (3) Relational Analysis and (4) Regression analysis.

DESCRIPTIVE ANALYSIS:

The descriptive analysis of data on Motivated Self-regulated Learning strategies of the student teachers and their Academic Performance in the undergraduate course were done by calculating the Mean and Standard Deviation scores with regard to demographic variables.

DIFFERENTIAL ANALYSIS:

The differential analysis of the data regarding Motivated Self-regulated Learning strategies of the student teachers and their Academic Performance in the undergraduate course were done by calculating the “t” values to identify the significance of the difference between the demographic variable Gender, Age, Place of birth, Subject studied in the undergraduate course and Marital status.

RELATIONAL ANALYSIS:

The relational analysis of the data regarding Motivated Self-regulated Learning strategies of the student teachers and their Academic Performance in the
undergraduate course were done by calculating the co-efficient of correlation to find out the relationship among the dimensions and subscales of the tool.

**REGRESSION ANALYSIS:**

The regression analysis of the data regarding Motivated Self-regulated Learning strategies of the student teachers and their Academic Performance in the undergraduate course were done by calculating the regression co-efficient to find out the prediction of the subscales of the tool on the Academic Performance.

**3.12. CONCLUSION**

This chapter presented the methodology of this research study that investigated the relationships among the variables. It consisted of an Introduction, Statement of the problem, Title, Objectives, Hypotheses, Assumptions, Delimitations, Research Strategy, Tool used, Pilot study, Data collection procedure and Scheme of analysis. This is followed by the fourth chapter which analyses the data on Motivated Self- regulated Learning Strategies.