CHAPTER-III
CHAPTER-III

RESEARCH METHODOLOGY

3.1 INTRODUCTION:

Teaching aptitude is an essential factor in teaching profession, unless a teacher is teaching aptitude with his job it is very difficult carry on his duties, honesty and efficiently. Teaching aptitude is necessary for the teachers to do their holy job a successful one.

Without having considerable amount of teaching aptitude any teacher cannot perform his/ her duty properly. Aptitude is the result of various attitudes of an employee towards his job. An aptitude is generally thought of as an ability to acquire a specific type of skill or knowledge an aptitude is a condition or combination of characteristics indicating of an individual’s ability to acquire with training some specific knowledge, skill, or set of responses, such as the ability to speak a language, to become a musician, to do mechanical work, etc there are certain factors, which are important such as Mental ability, Attitude towards children, Adaptability, Professional information, Interest in profession.

A teacher's role may vary among cultures. Teachers may provide instruction in literacy and numeracy, craftsmanship or vocational training, the arts, religion, civics, community roles, or life skills, or professional duty. A teacher who facilitates education for an individual may also be described as a personal tutor, or, largely historically, a governess. Formal education can take place through informal education may be assisted by a teacher occupying a transient or ongoing role. Researcher taken this research problem, the
teaching aptitude is very necessary in teaching field, teaching as an art. Teaching it means who providing the knowledge to students from teacher or school teacher is a person who provides education for pupils and students the role of teacher is often. Teaching is a doing the effective learning, maintenance the discipline, good guidance, developed the teacher pupil interaction, understanding the subject, stimulate the students previous knowledge, specific character, continuous process, formal and informal training, body of specialized knowledge, procedure for certifying, or validating, membership in the profession set of standards of performance intellectual, practical, and ethical ability.

Satisfaction is an essential factor in any profession, unless a man is satisfied with his job it is very difficult to carry on his duties, honesty and efficiently. Job Satisfaction is the result of various attitudes of an employee towards his job their attitudes are related with specific factors such as salary service, conditions, advancement, opportunities and other benefits. In case of teachers, there are certain factors, which are important such as intrinsic aspect of job, rapport with students, Relationship with authorities and colleagues, etc.

Adjustment is a popular expression used by people in day to day life Social adjustment can be defined as a psychological process. Thus social adjustment maintains peace and harmony in home, school, and society and in the country. The teachers try to instill adjustment skill in our students, colleagues, school situation, and higher authorities, parents etc... It is the teacher's responsibility to help the student cope with the existing situations of the school. For this we should contribute to improving the social environment of the school. Psychologists use the term adjustment of varying conditions of social and interpersonal relations in the society. Emotional adjustment being made, a complicated process for the
individual, then some special problems of adjustment arise. The way we interact with people depends to a great extent upon how we perceive them and how we interpret their behavior. Our perceptions of others’ personalities and feelings guide us in deciding the ego as the self-centered, self-preserving and individualizing part of our overall personality. For the professional preparation of the teachers, the study of social adjustment held by very important. How teacher performs is the duty as teacher is dependent to an expression of feelings and adjustment knowledge.

For the professional preparation of the teachers, the study of personality held by them is very important. How a teacher performs is the duty as teacher is dependent to a extent, on his personal values and beliefs. A positive Favorable personality makes the work not only easier but also more adjusting satisfying and professionally rewarding. A negative unfavorable personality makes the teaching task harder, more tedious and unpleasant. In addition a teacher’s personality not only affects his behavior the classroom, but also influences behavior of his students.

Importance of Teaching aptitude, Job Satisfaction, Social adjustment, And personality towards researcher to study the correlation between teaching aptitude of secondary school teachers in relation to their Job Satisfaction Social adjustment, and personality towards teaching profession from the psychological point of view the Job Satisfaction, Social adjustment, and personality is most influential on teachers in their teaching aptitude of teaching profession. Commonly speaking the teacher who satisfied with his job is personality, social adjustment towards teaching profession will favorable.

3.2 STATEMENT OF THE PROBLEM:
“A Study of Teaching Aptitude of Secondary School Teachers in relation to their Job Satisfaction, Social adjustment and Personality Factors”

3.3 OPERATIONAL DEFINITIONS OF KEY TERMS:

The operational definitions of the important term used in the present study are discussed and defined here with;

a) Teaching: Teaching is a social and professional activity. It is a process of development. It is system of actions which induce learning through interpersonal relationship. Teaching is a purposeful activity. The ultimate goal of teaching is to bring all-round development of a child. Teaching is an art. Teaching refers to activities that are designed and performed to produce change in student behavior. Thus, teaching is an activity taken up in schools to realize the educational goals.

c] Teaching Aptitude: Teaching aptitude refers to the aptitude for the teaching profession. The word ‘aptitude ‘is derived for the word ‘Aptos’ which means fitted for. It may be defined as a pronounced innate capacity for or ability in a given line of endeavor such as particular teaching, school subject, art or vacation. It refers to an individual’s in born capacities or potentialities which are indicative of special abilities.

Teaching aptitude is the capacity to acquire proficiency with a given amount of training in teacher education. It refers to the capacity of an individual to be skilled in teaching, receiving formal and informal training. It also refers to a teacher’s character, optimistic attitude, fair mindedness, impartial behavior, good manners, cooperativeness, wide interest, scholarly taste, dynamic personality, etc.
e] **Secondary School Level:** According to National Policy of Education 1986, 9th to 12th standard is included in secondary school level. Schooling provided for those beyond primary school age. One distinguishing feature from the primary school is the increased use of subject specialists and of timetabling according to such. Attempts to move towards a more integrated, cross-curricular approach have largely been unsatisfied, although this can feature in the early stage.

**d] Job Satisfaction:** Job satisfaction is a complex phenomenon having multiple inter-correlated casual factors; personal, social, cultural and economic. Job satisfaction is the result of various attitudes the person was towards his job, job related factors and towards life in general. Job satisfaction depends on various attitudes of an employee, related to the job and are concerned with factors like wage, supervision, steadiness of employment, conditions of work, opportunities for advancement, recognition of ability, fair evaluation of work, social relations in the job, treatment by employees, work environment and other such related factors: other personal factors such as employee’s age, gender, health, temperament and level of aspiration should also be considered. Moreover, his family relationships, social status and activities in various organizations also contribute to the job satisfaction of an employee.

Job satisfaction is an individual’s emotional reaction to the job itself. It is a person’s attitude towards the job.

c] **Social Adjustment:**

Adjustment is a signal of harmonious relationship between a man and his environment. When we adjust ourselves by this means we are changing in some way to adopt
or accommodate ourselves in order to get certain demands of our environment. The conditions in the environment are in a continuous realm of nature. Thus, the process of adjustment is a continuous one.

An individual’s social adjustment can be ascertained by his social development and adaptability to the social environment. Social Adjustment requires the development of social activities and virtues in an individual. It also requires that one should be social enough to live in harmony with one’s social beings and feel responsibility and obligation towards one’s fellow humans, society and country.

g] Personality:

Personality is the total quality of an individual’s behavior as it is revealed in his characteristics habits of acting and his personality philosophy of life”. According to Warren’s dictionary (1934) “Personality is the integrative organization of all the cognitive, affective, conactive and physical characteristics of an individual as it manifests itself in focal distinction from others”. According to Alport (1961) “Personality is the dynamic organization ‘within’ the individual of those psychological systems that determine his unique adjustments to this environment that determine his characteristics behavior and thought.”

**Personality Factors**: R.B.Cattell’s defined the personality factors. It is a Personality tests. The 16 factors approach to personality is one of the major theoretical areas in the study of personality. The 16 personality factors suggest that individual personalities are composed broad dispositions. Consider how you would describe the personality of a close friend. Chances are that you would list a number of factors, such as outgoing, kind and even-tempered. A factor can be thought of as a relatively stable characteristic that causes
individuals to behave in certain ways, the personality factors approach to personality is focused on differences between individuals. The combination and interaction of various factors forms a personality that is unique to each individual. Personality factors are focused on identifying and measuring these individual personality characteristics. Factor’s analyzing massive quantities of data to define and categorize the components of personality and to study their dynamic interaction scientific study of behavior as a social solution. Psychology tests including the personality motivation and abilities.

3.4 VARIABLES OF THE STUDY:

For the present study the following variables have been considered:

a) Independent variables:

1) Job satisfaction

2) Social adjustment

3) Personality factors

b) Dependent variable:

1) Teaching aptitude

c) Moderate variables:

1) Gender : Male and Female

2) Type of Institutions: a) Government b) Aided c) Unaided

3) Teaching Experience: i) Teachers with below 10 years teaching experience
ii) Teachers with above 10 years teaching experience

4) **Medium**: Kannada and English medium

5) **Subject**: Arts and Science

**3.5. HYPOTHESES OF THE STUDY:**

(1) There is no significant difference between male and female teachers of secondary schools with respect to Teaching aptitude and its dimensions scores i.e.

1. Mental ability
2. Attitude Towards Children
3. Adaptability
4. Professional Information
5. Interest in Profession

(2) There is no significant difference between male and female teachers of secondary schools with respect to their job satisfaction and its dimensions scores i.e.

- Intrinsic aspect of the job
- Salary, Promotional avenues, and service condition
- Physical facilities
- Institutional plans and policies
- Satisfaction with authorities
- Satisfaction with social status and family welfare
- Rapport with students
- Relationship with co-workers
(3) There is no significant difference between male and female teachers of secondary schools with respect to Adjustment and its dimensions scores i.e.

1. Emotional Adjustment
2. Social Adjustment

(4) There is no significant difference between male and female teachers of secondary schools with respect to Personality and its dimensions scores i.e.

- Reserved Vs Outgoing
- Less Intelligent Vs More Intelligent
- Affected by feelings Vs Emotionally Stable
- Humble Vs Assertive
- Sober Vs Happy go lucky
- Expedient Vs Conscientious
- Shy Vs Venturesome
- Tough minded Vs Tender minded
- Trusting Vs Suspicious
- Practical Vs Imaginative
- Forthright Vs Shrewd
- Placid Vs Apprehensive
- Conservating Vs Experimenting
- Group Dependent Vs Self-sufficient
- Un Disciplined Vs Controlled
- Relaxed Vs Tense
(5) There is no significant difference between age groups (below 35-yrs and above 35-yrs) of teachers of secondary schools with respect to Teaching aptitude and its dimensions scores i.e.

- Mental ability
- Attitude Towards Children
- Adaptability
- Professional Information
- Interest in Profession

(6) There is no significant difference between Age groups (below 35-yrs and above 35-yrs) of teachers of secondary schools with respect to their job satisfaction and its dimensions scores i.e.

- Intrinsic aspect of the job
- Salary, Promotional avenues, and service condition
- Physical facilities
- Institutional plans and policies
- Satisfaction with authorities
- Satisfaction with social status and family welfare
- Rapport with students
- Relationship with co-workers

(7) There is no significant difference between Age groups (below 35-yrs and above 35-yrs) of teachers of secondary schools with respect to Adjustment and its dimensions scores i.e.

- Emotional Adjustment
- Social Adjustment
There is no significant difference between Age groups (below 35-yrs and above 35-yrs) of teachers of secondary schools with respect to Personality and its dimensions scores i.e.

- Reserved Vs Outgoing
- Less Intelligent Vs More Intelligent
- Affected by feelings Vs Emotionally Stable
- Humble Vs Assertive
- Sober Vs Happy go lucky
- Expedient Vs Conscientious
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- Tough minded Vs Tender minded
- Trusting Vs Suspicious
- Practical Vs Imaginative
- Forthright Vs Shrewd
- Placid Vs Apprehensive
- Conservating Vs Experimenting
- Group Dependent Vs Self-sufficient
- Un Disciplined Vs Controlled
- Relaxed Vs Tense

There is no significant difference between teaching experiences (below 10 yrs, and above 10yrs) of teachers of secondary schools with respect to Teaching aptitude and its dimensions scores i.e.

- Mental ability
• Attitude Towards Children
• Adaptability
• Professional Information
• Interest in Profession

(10) There is no significant difference between Teaching experiences (below 10 yrs, and above 10yrs) of teachers of secondary schools with respect to their job satisfaction and its dimensions scores i.e.

• Intrinsic aspect of the job
• Salary, Promotional avenues, and service condition
• Physical facilities
• Institutional plans and policies
• Satisfaction with authorities
• Satisfaction with social status and family welfare
• Rapport with students
• Relationship with co-workers

(11) There is no significant difference between teaching experiences (below 10 yrs, and above 10yrs) of teachers of secondary schools with respect to adjustment and its dimensions scores i.e.

• Emotional Adjustment
• Social Adjustment
There is no significant difference between Teaching experiences (below 10 yrs, and above 10 yrs) of teachers of secondary schools with respect to Personality and its dimensions scores i.e.

- Reserved vs outgoing
- Less intelligent vs more intelligent
- Affected by feelings vs emotionally stable
- Humble vs assertive
- Sober vs happy go lucky
- Expedient vs conscientious
- Shy vs venturesome
- Tough minded vs tender minded
- Trusting vs suspicious
- Practical vs imaginative
- Forthright vs shrewd
- Placid vs apprehensive
- Conservating vs experimenting
- Group dependent vs self-sufficient
- Un disciplined vs controlled
- Relaxed vs tense

There is no significant difference between Teachers of aided, unaided and government secondary schools with respect to Teaching aptitude and its dimensions scores i.e.

- Mental ability
• Attitude Towards Children
• Adaptability
• Professional Information
• Interest in Profession

(14) There is no significant difference between Teachers of aided, unaided and government secondary schools with respect to their job satisfaction and its dimensions scores i.e.

• Intrinsic aspect of the job
• Salary, Promotional avenues, and service condition
• Physical facilities
• Institutional plans and policies
• Satisfaction with authorities
• Satisfaction with social status and family welfare
• Rapport with students
• Relationship with co-workers

(15) There is no significant difference between teachers of aided, unaided and government secondary schools with respect to adjustment and its dimensions scores i.e.

• Emotional Adjustment
• Social Adjustment

(16) There is no significant difference between teachers of aided, unaided and government secondary schools with respect to Personality and its dimensions scores i.e.

• Reserved vs outgoing
• Less intelligent vs more intelligent
- Affected by feelings vs emotionally stable
- Humble vs assertive
- Sober vs happy go lucky
- Expedient vs conscientious
- Shy vs venturesome
- Tough minded vs tender minded
- Trusting vs suspicious
- Practical vs imaginative
- Forthright vs shrewd
- Placid vs apprehensive
- Conservating vs experimenting
- Group dependent vs self-sufficient
- Un disciplined vs controlled
- Relaxed vs tense

(17) There is no significant difference between Kannada and English medium teachers of secondary schools with respect to Teaching aptitude and its dimensions scores i.e.

- Mental ability
- Attitude Towards Children
- Adaptability
- Professional Information
- Interest in Profession
There is no significant difference between Kannada and English medium teachers of secondary schools with respect to their job satisfaction and its dimensions scores i.e.

- Intrinsic aspect of the job
- Salary, Promotional avenues, and service condition
- Physical facilities
- Institutional plans and policies
- Satisfaction with authorities
- Satisfaction with social status and family welfare
- Rapport with students
- Relationship with co-workers

There is no significant difference between Kannada and English medium teachers of secondary schools with respect to Social Adjustment and its dimensions scores i.e.

- Emotional Adjustment
- Social Adjustment

There is no significant difference between Kannada and English medium teachers of secondary schools with respect to Personality and its dimensions scores i.e.

- Reserved vs outgoing
- Less intelligent vs more intelligent
- Affected by feelings vs emotionally stable
- Humble vs assertive
- Sober vs happy go lucky
- Expedient vs conscientious
• Shy vs venturesome
• Tough minded vs tender minded
• Trusting vs suspicious
• Practical vs imaginative
• Forthright vs shrewd
• Placid vs apprehensive
• Conservating vs experimenting
• Group dependent vs self-sufficient
• Un disciplined vs controlled
• Relaxed vs tense

(21) There is no significant difference between Arts and Science Subject teachers of secondary schools with respect to Teaching aptitude and its dimensions scores i.e.

• Mental ability
• Attitude Towards Children
• Adaptability
• Professional Information
• Interest in Profession

(22) There is no significant difference between Arts and Science Subject teachers of secondary schools with respect to their job satisfaction and its dimensions scores i.e.

• Intrinsic aspect of the job
• Salary, Promotional avenues, and service condition
• Physical facilities
• Institutional plans and policies
• Satisfaction with authorities
• Satisfaction with social status and family welfare
• Rapport with students
• Relationship with co-workers

(23) There is no significant difference between Arts and Science Subject teachers of secondary schools with respect to Adjustment and its dimensions scores i.e.
  • Emotional Adjustment
  • Social Adjustment

(24) There is no significant difference between Arts and Science Subject teachers of secondary schools with respect to Personality and its dimensions scores i.e.
  • Reserved vs outgoing
  • Less intelligent vs more intelligent
  • Affected by feelings vs emotionally stable
  • Humble vs assertive
  • Sober vs happy go lucky
  • Expedient vs conscientious
  • Shy vs venturesome
  • Tough minded vs tender minded
  • Trusting vs suspicious
  • Practical vs imaginative
  • Forthright vs shrewd
- Placid vs apprehensive
- Conservating vs experimenting
- Group dependent vs self-sufficient
- Un disciplined vs controlled
- Relaxed vs tense

(25) There is no significant relationship between teaching aptitude and its dimensions scores (i.e. mental ability, attitude towards children, adaptability, professional information, interest in profession) with job satisfaction and its dimensions scores (i.e. intrinsic aspect of the job, salary, promotional avenues, and service condition, physical facilities, institutional plans and policies, satisfaction with authorities, satisfaction with social status and family welfare, rapport with students, relationship with co-workers) of teachers of secondary schools.

(26) There is no significant relationship between teaching aptitude and its dimensions scores (i.e. mental ability, attitude towards children, adaptability, professional information, interest in profession) with adjustment and its dimensions scores (i.e. emotional adjustment and social adjustment) of teachers of secondary schools.

(27) There is no significant relationship between teaching aptitude and its dimensions scores (i.e. mental ability, attitude towards children, adaptability, professional information, interest in profession) with personality and its dimensions scores (i.e. reserved vs outgoing, less intelligent vs more intelligent, affected by feelings vs emotionally stable, humble vs assertive, sober vs happy go lucky, expedient vs conscientious, shy vs venturesome, tough minded vs tender minded, trusting vs suspicious, practical vs imaginative, forthright vs shrewd, placid vs apprehensive, conservating vs experimenting, group dependent vs self-
sufficient, un disciplined vs controlled and relaxed vs tense) of teachers of secondary schools.

(28) There is no significant relationship among dimensions of teaching aptitude scores (i.e. mental ability, attitude towards children, adaptability, professional information, interest in profession) of teachers of secondary schools.

(29) There is no significant relationship between dimensions of job satisfaction scores (i.e. intrinsic aspect of the job, salary, promotional avenues, and service condition, physical facilities, institutional plans and policies, satisfaction with authorities, satisfaction with social status and family welfare, rapport with students, relationship with co-workers) of teachers of secondary schools.

(30) There is no significant relationship among dimensions adjustment scores (i.e. emotional adjustment and social adjustment) of teachers of secondary schools.

(31) There is no significant relationship among dimensions of personality scores (i.e. reserved vs outgoing, less intelligent vs more intelligent, affected by feelings vs emotionally stable, humble vs assertive, sober vs happy go lucky, expedient vs conscientious, shy vs venturesome, tough minded vs tender minded, trusting vs suspicious, practical vs imaginative, forthright vs shrewd, placid vs apprehensive, conservating vs experimenting, group dependent vs self-sufficient, undisciplined vs controlled and relaxed vs tense) of teachers of secondary schools.

(32) Job satisfaction, adjustment and personality are would not be significant predictors of teaching aptitude of teachers of secondary schools.

(33) Job satisfaction, adjustment and personality are would not be significant predictors of teaching aptitude of male teachers of secondary schools.
(34) Job satisfaction, adjustment and personality are would not be significant predictors of teaching aptitude of female teachers of secondary schools.

(35) Job satisfaction, adjustment and personality are would not be significant predictors of teaching aptitude of above 35 yrs of aged teachers of secondary schools.

(36) Job satisfaction, adjustment and personality are would not be significant predictors of teaching aptitude of below 35 yrs of aged teachers of secondary schools.

(37) Job satisfaction, adjustment and personality are would not be significant predictors of teaching aptitude of teachers of aided secondary schools.

(38) Job satisfaction, adjustment and personality are would not be significant predictors of teaching aptitude of teachers of unaided secondary schools.

(39) Job satisfaction, adjustment and personality are would not be significant predictors of teaching aptitude of teachers of government secondary schools.

(40) Job satisfaction, adjustment and personality are would not be significant predictors of teaching aptitude of above 10 yrs of experienced teachers of secondary schools.

(41) Job satisfaction, adjustment and personality are would not be significant predictors of teaching aptitude of below 10 yrs of experienced teachers of secondary schools.

(42) Job satisfaction, adjustment and personality are would not be significant predictors of teaching aptitude of Kannada medium teachers of secondary schools.

(43) Job satisfaction, adjustment and personality are would not be significant predictors of teaching aptitude of English medium teachers of secondary schools. (44) Job satisfaction, adjustment and personality are would not be significant predictors of teaching aptitude of Arts teachers of secondary schools.

(45) Job satisfaction, adjustment and personality are would not be significant predictors of teaching aptitude of Science teachers of secondary schools.
3.6 POPULATION OF THE STUDY:

To make the study worthwhile a representative of the Bagalkot District population has been taken. The total 399 secondary schools of Bagalkot District (6 Taluk’s):

1) Badami  2) Bagalkot  3) Bilagi  4) Hungund  5) Jamakhandi  6) Mudhol Taluka’s

Table 1: Population of the Bagalkot District Taluka wise Secondary Schools and Teachers:

<table>
<thead>
<tr>
<th>Sl.no</th>
<th>Name of the Taluka’s</th>
<th>No. of Schools</th>
<th>n</th>
</tr>
</thead>
<tbody>
<tr>
<td>1)</td>
<td>Badami Taluk-</td>
<td>68</td>
<td>5</td>
</tr>
<tr>
<td>2)</td>
<td>Bagalkot Taluk</td>
<td>67</td>
<td>10</td>
</tr>
<tr>
<td>3)</td>
<td>Bilagi Taluk</td>
<td>40</td>
<td>5</td>
</tr>
<tr>
<td>4)</td>
<td>Hungund Taluk</td>
<td>72</td>
<td>10</td>
</tr>
<tr>
<td>5)</td>
<td>Jamakhandi Taluk</td>
<td>87</td>
<td>10</td>
</tr>
<tr>
<td>6)</td>
<td>Mudhol Taluk.</td>
<td>65</td>
<td>12</td>
</tr>
</tbody>
</table>

3.7 SAMPLE:

Stratified random sampling procedure was employed for the purpose of drawing sample from the population for the present study. Accordingly samples of 355 teachers from the secondary schools of Bagalkot District are selected.
<table>
<thead>
<tr>
<th>Sl.no</th>
<th>Moderate Variables</th>
<th>Groups</th>
<th>N</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>Institutions</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Govt</td>
<td>120</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Aided</td>
<td>151</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Unaided</td>
<td>84</td>
<td></td>
</tr>
<tr>
<td>2.</td>
<td>Gender</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Male</td>
<td>187</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Female</td>
<td>168</td>
<td></td>
</tr>
<tr>
<td>3.</td>
<td>Subject</td>
<td>Arts</td>
<td>234</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Science</td>
<td>121</td>
</tr>
<tr>
<td>4.</td>
<td>Medium</td>
<td>Kannada Medium</td>
<td>310</td>
</tr>
<tr>
<td></td>
<td></td>
<td>English Medium</td>
<td>45</td>
</tr>
<tr>
<td>5.</td>
<td>Experience</td>
<td>Below 10 years</td>
<td>220</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Above 10 years</td>
<td>135</td>
</tr>
<tr>
<td>6.</td>
<td>Age</td>
<td>Below 35 years</td>
<td>182</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Above 35 years</td>
<td>173</td>
</tr>
</tbody>
</table>
3.8 TOOLS USED FOR THE STUDY:

The data has been collected on different aspects of Teaching aptitude having relationship with job satisfaction, social adjustment and 16 P.F (personality Factors) of secondary school teachers by using different questionnaires.

The data were collected with the help of the following tools;

2) Teaching Aptitude Test Battery.

3) The Job Satisfaction scale.

4) The Social Adjustment Inventory.

5) The16P.F Test (Forms A+B).

3.6.2 Teaching Aptitude Test Battery for Secondary school Teachers

This teaching aptitude test has been designed for the use among teachers and prospective teachers of elementary school. The test is for English knowing population. The battery is intended to serve as tool for selecting students for admission in teacher-training institution and also teachers for in elementary schools: This test Battery designed by Dr. R.P. Singh and Dr. S.N. Sharma (2011) contained 120 items classified in five areas (I) Mental ability (2) Attitude towards children (3) Adaptability (4) Professional information, and (5) Interest in profession.

Teaching Aptitude Test Battery (TATB): Total 5 Subtests and 120 Items in Sub-Test I- a) Word Analogy (b)Number Series(c)Reasoning, and Sub-Test –II.- Attitude towards children Sub-Test III- Adaptability, Sub-Test IV- Professional information, Sub-Test -V- Interest in profession. All the items in sub-tests I, III, IV and V are to be marked right or wrong. For each right response 'one' is to be given and for each wrong 'zero'. Subtest II is to be score on
a 5 point scale. The best answer is to be given a credit of 'five' while the worst answer is to be given the credit of 'one'. Find a score of a test on this subtest is obtained by dividing the sum obtained score by 5. The score on the whole test of a test is obtained by adding his scores all the 5 sub-tests. The maximum score one can obtain on this test is 120. Scoring can be made with the help of scoring key.

**Standardization:** Test consisting of 120 items, was administered on a sample of 1090 pupil teachers reading in Primary Teacher Training Institutions of Bihar. Ninety cases were rejected as they were not properly answered. Hence the Standardization sample consisted of 1000 subjects. The distribution of scores for the total and for the five areas of it was tested for nominative by applying Chi-Square technique. But distributions did not depart significantly from normality.

**Reliability:** Reliability of the test was examined by three different methods, namely split-half method, test-retest method, and K-R method. Table 1 gives the reliability co-efficient of the test by different methods.

**Table 3: Reliability Test Methods:**

<table>
<thead>
<tr>
<th>Method Used</th>
<th>N</th>
<th>Reliability Co-efficient</th>
<th>Per</th>
</tr>
</thead>
<tbody>
<tr>
<td>Split-half Method</td>
<td>1000</td>
<td>0.98*</td>
<td>0.002</td>
</tr>
<tr>
<td>Test- Retest Method</td>
<td>1000</td>
<td>0.97*</td>
<td>0.004</td>
</tr>
<tr>
<td>K-R method</td>
<td>1000</td>
<td>0.89*</td>
<td></td>
</tr>
</tbody>
</table>

*Significant of .01 level of significant.

Reliability by split-half method was 0.98*; Test retest method of the scale was 0.97*; and Reliability by K-R method 0.89*. 
Validity: The scores on total test were validated against rating of the instructor’s teacher training institutions. Product moment co-efficient of correlation was calculated between scores obtained on the test and the positions of trainees given the instructors. The value of co-efficient of correlation was found to be 0.421 with a Probable error + 0.026.

Scoring: Scale was fairly adequate, as other researchers have already used this scale in India and obtained positive and significant relationship with the variables like gender, teaching experience. This scale consists of 120 items. The items of the sale were classified in to Sub-Test- I (3type) to Sub-Test V total 5 categories. These are as follows serial of the sub tests.

Table 4: Factors of Teaching Aptitude and Distributions of Items:

<table>
<thead>
<tr>
<th>Sub-Tests</th>
<th>Item. No (s)</th>
<th>Total numbers</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sub-Test-I- Mental Ability</td>
<td>Mental Ability</td>
<td></td>
</tr>
<tr>
<td>(A) Word Analogy</td>
<td>1-10</td>
<td>10</td>
</tr>
<tr>
<td>(B) Number Series</td>
<td>11-22</td>
<td>12</td>
</tr>
<tr>
<td>(C) Reasoning</td>
<td>23-32</td>
<td>10</td>
</tr>
<tr>
<td>Sub-Test-II-- Attitude towards children</td>
<td>20</td>
<td>20</td>
</tr>
<tr>
<td>Sub-Test- III- Adaptability</td>
<td>28</td>
<td>28</td>
</tr>
<tr>
<td>Sub-Test-IV- Professional information</td>
<td>28</td>
<td>28</td>
</tr>
<tr>
<td>Sub-Test-V- Interest in profession.</td>
<td>12</td>
<td>12</td>
</tr>
<tr>
<td>Total= 120 Items</td>
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<td></td>
</tr>
</tbody>
</table>

Table 5 : Scoring Table(TATB):

<table>
<thead>
<tr>
<th>Category</th>
<th>I</th>
<th>II</th>
<th>III</th>
<th>IV</th>
<th>V</th>
<th>Total</th>
<th>Interpretation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Score</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
This Teaching Aptitude Battery consisted of 120 items. The maximum possible score on this scale is 120x1=120. All the items in sub tests I, III, IV, V are to be marked right or wrong. For each right response ‘one’ is to be given and wrong response ‘zero’. Items in sub-test II are to be scored on a five point scale. The best answer is to be given ‘Five’ while the worst answer is to be given ‘one’ Five point scale from 1 to 5 response of “Totally agree” scoring is 5 and “agree” it is 4 for “Neutral” 3 marks are allotted and for “disagree” scoring is 2 and for “Totally disagree” it is 1. (these are items of 1, 8, 9, 10, 11, 12, 13) and “Totally agree” scoring is 1 and “agree” it is 2 for “Neutral” 3 marks are allotted and for “disagree” scoring is 4 and for “Totally disagree” it is 5. (these are items of 1 to 14 to 20) Total score of the individual was considered for analysis.

3.6.3 Job Satisfaction Scale for Secondary School Teachers:

In the present study, Job Satisfaction scale was used to collect the data, which was constructed and standardized by by Meera Dixit (1993). It was five point scale inventory.

Reliability: Test-re-test Reliability of the scale was 86: reliability by split-half method was 0.92.

Validity: Validity of the scale was fairly adequate, as other researchers have already used this scale in India and obtained positive and significant relationship with the variables like gender, teaching experience. This scale consists of 52 items. The items of the sale were classified in to 8 categories. These are as follows serial number items.
Table 6: Factors of Job Satisfaction and distributions of items:

<table>
<thead>
<tr>
<th>Job Factors</th>
<th>Item. No (s)</th>
<th>Total numbers</th>
</tr>
</thead>
<tbody>
<tr>
<td>a) Intrinsic aspect of the job</td>
<td>1,11,25,30,35,46&amp;52</td>
<td>7</td>
</tr>
<tr>
<td>b) Salary, Promotional avenues, and service condition</td>
<td>3,12,19,20,31,34,45&amp;50</td>
<td>8</td>
</tr>
<tr>
<td>c) Physical facilities</td>
<td>2,10,2,29,36,43,48,49&amp;51</td>
<td>9</td>
</tr>
<tr>
<td>d) Institutional plans and policies</td>
<td>4,13,26,38,40&amp;47</td>
<td>6</td>
</tr>
<tr>
<td>e) Satisfaction with authorities</td>
<td>5,14,21,27,32,41</td>
<td>6</td>
</tr>
<tr>
<td>f) Satisfaction with social status and family welfare</td>
<td>8,9,17,18 and 23</td>
<td>5</td>
</tr>
<tr>
<td>g) Rapport with students</td>
<td>7,15,22,28,33,39&amp;39</td>
<td>6</td>
</tr>
<tr>
<td>h) Relationship with co-workers</td>
<td>6,16,37,42 &amp;44</td>
<td>5</td>
</tr>
<tr>
<td>Total</td>
<td></td>
<td>52</td>
</tr>
</tbody>
</table>

**Scoring:** This Job Satisfaction scale consisted of 52 items. The maximum Possible score on this scale is 52x5=260, and maximum score is 52x1=52. One specimen item is given below which explains the way of assessment.

Table 7: Assessment the Score of Statements:

1. For Positive Items:

<table>
<thead>
<tr>
<th>Options</th>
<th>Always</th>
<th>Often</th>
<th>Occasionally</th>
<th>Seldom</th>
<th>Never</th>
</tr>
</thead>
<tbody>
<tr>
<td>Marks Allotted</td>
<td>4</td>
<td>3</td>
<td>2</td>
<td>1</td>
<td>0</td>
</tr>
</tbody>
</table>

2. For Negative Items:

<table>
<thead>
<tr>
<th>Options</th>
<th>Always</th>
<th>Often</th>
<th>Occasionally</th>
<th>Seldom</th>
<th>Never</th>
</tr>
</thead>
<tbody>
<tr>
<td>Marks Allotted</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
</tbody>
</table>
Positive and Negative Items:

<table>
<thead>
<tr>
<th>Sl.No</th>
<th>Dimensions</th>
<th>Positive Items:</th>
<th>Negative Items</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Consideration</td>
<td>2,3,4,6,8,10,14,15,19,20</td>
<td>1,5,7,9,11,12,13,16,17,18,21</td>
</tr>
<tr>
<td></td>
<td></td>
<td>22,23,24,25,26,27,28</td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>Initiating Structure</td>
<td>1,2,4,5,6,8,10,11,12,13,14,15,16,17,19,20</td>
<td>3,7</td>
</tr>
</tbody>
</table>

As shown above scoring is a five point scale from 1 to 5 response of “Strongly agree” scoring is 5 and “agree” it is 4 for “Undecided” 3 marks are allotted and for “disagree” scoring is 2 and for “Strongly disagree” it is 1. Total score of individual was considered for analysis.

3.6.4 Social Adjustment Inventory for Secondary School Teachers

**Standardization:** The present inventory designed by Dr. Roma Pal (1985) is a useful device to assess Social Adjustment of Higher Secondary and college going pupils. This inventory can also be used for other age groups. Two types of scores, e.g., emotional and social adjustment can also be obtained. But it is better to get the scores of social adjustment because emotional adjustment is a part of social adjustment. Items were selected, after careful examinations from available standard inventories, and where necessary, were slightly modified. Some new items were also included in the light of the description of the variables. In the preliminary form, there were 80 items. After the pilot study, only 60 items were retained. For the pilot study, the inventory was presented on 197 subjects (age range 16 to 25 yrs) In order to select the items, it was decided to find out validity indices of the following the procedure given by
the Garett, H.E.. The total scores on each of the item of the preliminary sample (N=197) were arranged in the decreasing order and 27 percent of the top and 27 percent of the bottom scores were, identified. These groups are to be called technically high and the low groups. The number of persons in the high and the low group answering the items as per the scoring instruction was found out and converted in to percentages. The discriminative power of the item its consistency with the total score on the test was judged by correlation. \((r_{\text{bis}})\) of the item with the whole test following the J.C.Flanagan’s Table of Normalized Biserial Correlation Coefficients. The obtained indices of the item ranged between 0 to 79, taking the lead from the satisfactory item index of .20 only 60 items have been selected.

**Reliability:** Determination of the reliability the inventory was administered to 300 pupils of Intermediate and College (Both Male and Females in equal number) and split-half reliability has been calculated. The reliability coefficient was .82. For the test retest reliability, the inventory was administered twice to the 100 pupils of B.A (Both Male and Female) and correlation coefficient was .87.

**Validity:** Validity of emotional and social adjustment scales of this inventory, the present inventory and Tiwari and Srivastava’s Adjustment inventory have been administered to a group of 150 undergraduate and post graduate students. The validity of the two inventory (Only two scales) has come out to be .77 and .80 respectively.

**Scoring:** In the present study, Social Adjustment inventory was used to collect the sixty statements followed by ‘YES’ or ‘NO’ response. Split-half reliability has been calculated. Inventory was fairly adequate, as other researchers have already used this scale in India and obtained positive and significant relationship with the variables like sex, social acceptance, age, teaching experience. This scale consists of 60 items. The items of the sale were
classified into 2 categories. These are as follows: serial number items. This social adjustment inventory scoring system is very simple, consisting of 60 items. Each item has two responses: ‘Yes’ or ‘No’. For the subjects’ response of ‘Yes’, a score of 2 is given, and ‘No’ response is given 1 score. For getting the emotional adjustment scores (E.A.S.) and social adjustment scores (S.A.S.), the scoring procedure applied the items separately. The scoring of this scale involves counting the number of answers marked below the column ‘YES’ in two areas of adjustment: one is Emotional Adjustment, and the other is Social Adjustment. But, not excluding Emotional Adjustment, only statements that are marked in column ‘YES’ or ‘No’, ‘YES’ were counted to obtain score on the particular dimension. ‘No’ were counted to obtain score on the particular dimension. For the Emotional Adjustment, the number of items marked ‘YES’ or ‘NO’ was counted to obtain a score. In this case, high scores indicated emotional adjustment and Social Adjustment. A total adjustment score indicated emotional adjustment. A total adjustment score can be calculated by summing the scores on the Social Adjustment and subtracting from this total score. The above scoring procedure should be applied for the following items separately. For getting the composite scores of social adjustment, the total scores of emotional and social items should be added.

Table 7: Factors of Social Adjustment and distributions of items:

<table>
<thead>
<tr>
<th>Social Adjustment Factors</th>
<th>Item No(’s)</th>
<th>Total number</th>
</tr>
</thead>
<tbody>
<tr>
<td>Emotional Adjustment</td>
<td>1, 3, 4, 7, 8, 9, 12, 15, 16, 18, 21, 23, 25, 27, 28, 31, 33, 35, 36, 39, 41, 42, 45, 47, 49, 50, 53, 55, 57, 60</td>
<td>30</td>
</tr>
<tr>
<td>Social Adjustment</td>
<td>2, 5, 6, 10, 11, 13, 14, 17, 19, 20, 22, 24, 26, 29, 30, 32, 34, 37, 38, 40, 43, 44, 46, 48, 51, 52, 54, 56, 58, 59</td>
<td>30</td>
</tr>
<tr>
<td></td>
<td><strong>Total</strong></td>
<td><strong>60</strong></td>
</tr>
</tbody>
</table>
3.6.5 16 Personality Factors Scale for Secondary School Teachers:

The 16 Personality Factor Questionnaire (The 16 P.F), developed by Cattel & Ebser (1962) at the institute for Personality and Ability Testing, Campign (U.S.A.) in an objectively scorable test to give the most complete coverage of personality possible in a brief time. The 16 P .F. measures 16 dimensions or factors of personality as suggested by Cattell. These dimensions are quite independent and the co-relations among these are usually small. This 16 Personality Factor Questionnaire scoring system is consisted of 187 items. Each of the 16 factors gives entirely new information regarding the personality of individuals.

Reliability: The reliability coefficients for 16 factors were computed by (i) test-retest method at one week’s interval (0.45 to 0.81), (ii) Parallel form method (0.26 to 0.67) and (iii) The method of rational equivalence (0.34 to 0.74).

Validity: The validity of the 16 PF Questionnaire was estimated by (I) point-biserial correlation of each item as index of item validity, correlation with HSPQ.

Scoring: This 16 Personality Factor Questionnaire scoring system is consisted of 187 items. The 16 P.F. A or B forms Scoring key was first considered the 16 factors is – there are each sheets 8 Raw Scores (total 16 fs) to be obtained with each of the horizontal layers areas the key. The answer seen though the holes (circles) count either 2 or 1 as indicated by the number adjacent to the hole. To obtain the Factor ‘A ‘score add the weight for the answer visible in the ‘A’ horizontal strip and record the sum on the answer sheet underneath the A. Repeat this process for the other factor strips. But Low Score is “ answer keys” ‘A’ (1)part and High Score is consider the “ answer keys” ‘B’ (2)part, this second key is used exactly
like the number 1 key to obtain the remaining eight raw scores, but total scoring is including
the scale consisted of 187 items from the 16 factors or dimensions for A or B form. But 16
factors like A,B,C,E,F,G,H,I,L,M,N,O,Q1 Q2 Q3 Q4 are basically considered the Raw score.
Each factor wise including the ‘Low’ and ‘High’ score. For getting the composite scores of
Personality Factors, the total scores of ‘Low’ and ‘High’ scores should be added. Check the
each question has one and only one answer. Place that key over the left-hand side of the
answer sheet having the Raw Score column exposed at the right of the answer sheet.

The 16 P .F. measures the following items—

<table>
<thead>
<tr>
<th>A- Reserved</th>
<th>Vs</th>
<th>Outgoing</th>
</tr>
</thead>
<tbody>
<tr>
<td>B- Less Intelligent</td>
<td>Vs</td>
<td>More Intelligent</td>
</tr>
<tr>
<td>C- Affected by feelings</td>
<td>Vs</td>
<td>Emotionally Stable</td>
</tr>
<tr>
<td>E- Humble</td>
<td>Vs</td>
<td>Assertive</td>
</tr>
<tr>
<td>F- Sober</td>
<td>Vs</td>
<td>Happy go lucky</td>
</tr>
<tr>
<td>G- Expedient</td>
<td>Vs</td>
<td>Conscientious</td>
</tr>
<tr>
<td>H- Shy</td>
<td>Vs</td>
<td>Venturesome</td>
</tr>
<tr>
<td>I- Tough minded</td>
<td>Vs</td>
<td>Tender minded</td>
</tr>
<tr>
<td>L- Trusting</td>
<td>Vs</td>
<td>Suspicious</td>
</tr>
<tr>
<td>M- Practical</td>
<td>Vs</td>
<td>Imaginative</td>
</tr>
<tr>
<td>N- Forthright</td>
<td>Vs</td>
<td>Shrewd</td>
</tr>
<tr>
<td>O- Placid</td>
<td>Vs</td>
<td>Apprehensive</td>
</tr>
<tr>
<td>Q1- Conservating</td>
<td>Vs</td>
<td>Experimenting</td>
</tr>
<tr>
<td>Q2- Group Dependent</td>
<td>Vs</td>
<td>Self-sufficient</td>
</tr>
</tbody>
</table>
Table 9: The above scoring procedure should be applied for the following 16 P.F. (Factors) / Dimensions:

<table>
<thead>
<tr>
<th>SCORING KEY FOR 16 P.F. TEST, FORM A or B</th>
<th>PART (1)</th>
<th>Raw Score</th>
</tr>
</thead>
<tbody>
<tr>
<td>Q3-Un Disciplined</td>
<td></td>
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<tr>
<td>Vs</td>
<td></td>
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<tr>
<td>Controlled</td>
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<tr>
<td>Q4- Relaxed</td>
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<tr>
<td>Vs</td>
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<td></td>
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<tr>
<td>Tense</td>
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</tbody>
</table>

Total items in Toto are provided for each of the forms A and B. The questions are arranged in a roughly cyclic order derived by a plan to give maximum convenience in scoring by stencil and to ensure variety and interest for the examiner. This is used in India many times. Mehta (1972), Singh (1970), Kaul (1972) have also successfully used it.
**SCORING KEY FOR 16 P.F. TEST, FORM A or B – PART- II**

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<th>Raw Score (2)</th>
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</table>

**Notes:**
- Raw Score: 2
- B, E, G, I columns correspond to the scoring criteria.
For the purpose of collecting data all the four tools were personally administered by the researchers to the respondents, teaching aptitude scale which was constructed and standardized by Dr. R.P Singh and Dr. S.N. Sharma (2011) and Job satisfaction scale standardized by Meera Dixit (1993), Social Adjustment Inventory standardized by Dr. Roma Pal (1985) and 16 P. F. Questionnaire (The 16 P.F) Standardized by Cattel (1970). First the investigator got multiple copies of the teaching aptitude scale, job satisfaction scale, and social Adjustment Inventory, 16 Personality (P.F) scale and circuited to the 52 secondary school teachers, of each school who are working in Bagalkot District personally and
requested for their responses ultimately the investigator was able to get responses of teachers. The responses received were subjected to further analysis.

3.10 STATISTICAL TECHNIQUES OF THE STUDY:

The purpose of the convenience, the different sections of Statistical Techniques of the study has been organized under the following sections:

1. Descriptive statistics: Mean and standard Values.
2. Differential statistics: One way ANOVA and ‘t’-test.
3. Correlation analysis of teaching aptitude with other variables of teachers of secondary schools.
4. Multiple linear regressions analysis of teaching aptitude with other variables of teachers of secondary schools.

Descriptive statistics:

In this section, the mean and standard values of teaching aptitude and its dimensions scores (i.e. mental ability, attitude towards children, adaptability, professional information, interest in profession), job satisfaction and its dimensions scores (i.e. intrinsic aspect of the job, salary, promotional avenues, and service condition, physical facilities, institutional plans and policies, satisfaction with authorities, satisfaction with social status and family welfare, rapport with students, relationship with co-workers), adjustment and its dimensions scores (i.e. emotional adjustment and social adjustment), personality and its dimensions scores (i.e.
reserved vs outgoing, less intelligent vs more intelligent, affected by feelings vs emotionally stable, humble vs assertive, sober vs happy go lucky, expedient vs conscientious, shy vs venturesome, tough minded vs tender minded, trusting vs suspicious, practical vs imaginative, forthright vs shrewd, placid vs apprehensive, conservating vs experimenting, group dependent vs self-sufficient, un disciplined vs controlled and relaxed vs tense) of teachers of secondary schools are calculated according to sex (male and female), age groups (below 35-yrs and above 35-yrs), types of management (aided, unaided and government), teaching experience (below 10 yrs, and above 10yrs), mediums (Kannada and English) and subjects (Arts and Science) and presented in the following section.

**Differential statistics:**

In this section, we compared the different characteristics like sex (male and female), age groups (below 35yrs and above 35yrs), types of management (aided, unaided and government), teaching experience (below 10 yrs, and above 10yrs), mediums (Kannada and English) and subjects (Arts and Science) with respect to teaching aptitude and its dimensions scores (i.e. mental ability, attitude towards children, adaptability, professional information, interest in profession), job satisfaction and its dimensions scores (i.e. intrinsic aspect of the job, salary, promotional avenues, and service condition, physical facilities, institutional plans and policies, satisfaction with authorities, satisfaction with social status and family welfare, rapport with students, relationship with co-workers), adjustment and its dimensions scores (i.e. emotional adjustment and social adjustment), personality and its dimensions scores (i.e. reserved vs outgoing, less intelligent vs more intelligent, affected by feelings vs emotionally stable, humble vs assertive, sober vs happy go lucky, expedient vs conscientious, shy vs
venturesome, tough minded vs tender minded, trusting vs suspicious, practical vs imaginative, forthright vs shrewd, placid vs apprehensive, conservating vs experimenting, group dependent vs self-sufficient, un disciplined vs controlled and relaxed vs tense) of teachers of secondary schools by one way ANOVA followed Tukeys multiple posthoc procedures and unpaired T-test. The results are presented in the following tables.

**Correlation analysis:**

In the present study, the teaching aptitude and its dimensions scores of teachers of secondary schools is taken as dependent variable and job satisfaction and its dimensions, adjustment and its dimensions; personality and its dimensions of teachers of secondary schools are considered as independent variables.

In order to find out the relationship between dependent variable with independent variables, the correlation coefficients were obtained. The correlation coefficient is calculated by using the Karl-Pearson’s correlation coefficient method and it is mathematically expressed in the following way:

$$r = \frac{\sum XY - n\bar{x}\bar{y}}{\sqrt{(\sum X^2 - n\bar{x}^2)(\sum Y^2 - n\bar{y}^2)}}$$

If $r$ value if zero, it indicates that there is no correlation between the two variables. If $r$-value is positive, it indicates that, one variable values increases with increase in another variable value and if $r$-value is negative, it indicates that, one variable values increases with decrease in another variable value.
**Regression Analysis:**

Regression is the statistical tool with the help of which one can predict the unknown values of one variable from known values of other variables. Regression analysis is concerned with the deviation of an appropriate mathematical expression of the functional relationship between variables. This expression is derived for the purpose predicting the values of a dependent variable on the basis of independent variables. Regression analysis is thus, designed to examine the relationship of a variable \( Y \) to a set of other variables \( X_1, X_2, X_3, \ldots, X_n \).

The relationship between dependent variable (Y) and the independent variables (X) can be studied through mathematical formulae. The most commonly used linear equation is:

\[
Y = b_1X_1 + b_2X_2 + \ldots + b_nX_n + b_0
\]

Here \( Y \) the dependent variable is to be predicted, \( X_1, X_2, X_3, \ldots, X_n \) are the known variables with which prediction are to be made and \( b_1, b_2, \ldots, b_n \) are the regression coefficients of \( X_1, X_2, X_3, \ldots, X_n \) variables that are determined from the observed data and \( b_0 \) is the constant (Y intercept).

The present study, the teaching aptitude scores of teachers of secondary schools is considered as dependent variable. There are three variables taken as the independent variables i.e. Job satisfaction (\( X_1 \)), adjustment (\( X_2 \)) and Personality (\( X_3 \)) teachers of secondary schools.
Therefore, the linear model becomes \( Y = b_1 X_1 + b_2 X_2 + b_3 X_3 \) where,

\( X_1 = \text{Job satisfaction}, \)

\( X_2 = \text{Adjustment}, \)

\( X_3 = \text{Personality}. \)