A Study of Personality and Effectiveness in Science Teaching of Secondary School Teachers

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Abstract: Personality and Teaching Effectiveness of a teacher both play vital role in Teaching Profession. The present study was conducted to see the significant difference in Personality and Effectiveness in Science Teaching of Secondary School Teachers. Personality put a great influence on the students before teaching starts while any teacher can impress the students with their teaching effectiveness. The purpose of this study is to Study the Personality and Effectiveness In Science Teaching of Secondary School Teachers. The purposive sampling technique was used to select 450 teachers of Patna. A standardized tool was used for personality and a self-constructed and validated tool was used to measure effectiveness in science teaching of secondary School Teachers. ANOVA and t-test was applied to analyse the data. In the present study it was found that there is a significant difference in personality of a teachers on the basis of school types and gender while no significant difference was found in their effectiveness in science teaching on the basis of their school types as well as gender.

Keywords: Personality, Effectiveness, Science Teaching, Secondary School Teachers.

1. INTRODUCTION

Personality and Teaching Effectiveness of a teacher both play vital role in Teaching Profession. The present study was conducted to see the significant difference in Personality and Effectiveness in Science Teaching of Secondary School Teachers. Personality put a great influence on the students before teaching starts while any teacher can impress the students with their teaching effectiveness.

Personality is something everybody knows that it exists, but nobody knows that what it is. (Schneewind and Ruppert, 1998). It is certainly true that it is difficult to put human personality which Goethe (1970) called the greatest happiness for children of this earth into scientific terms. (http://www.mcser.org).

Personality determines a set of important characteristics and that how people interact with others. Human personality is the combination of a number of traits. Personality can be measured as a set of items usually questions about behavior and feelings to which the subjects have to respond by agreeing or disagreeing with that question or statements.

According to Woodworth, “Personality is the Total quality of an individual’s behavior as it is revealed in his characteristic, habits of thought and expression, his attitudes and interests, his manner of acting and his personal philosophy of life”. Deep within lies in every individual a powerful urge to grow up and blossom out as a person – to be distinguished from the sub-human species. We might be struck at the majesty of an elephant or the ferocity of a tiger or the elegant plumage of peacock or even the incredible imitative capacity of a chimpanzee’. But, in none of these cases, do we use the term personality. It is reserved primarily for the members of the Homo Sapiens.

Effectiveness, implicitly incorporates various connotations in its meanings. This concept, when analysed, divulges diverse dimensions. As such, a study of effectiveness reveals vital issues in the understanding of human beings. An ideal
effectiveness is always considered to be the apex of perfection to be desired and worked for, by all of us in our respective areas of engagements. This utopian reach is characterised by optimum levels of efficiency and productivity on the part of the workmen. In psychological terms, it is the height of maturity and learning in the life span of an individual. At this stage, the person is capable of channelising all his energies in his strides towards the cherished goals. Moreover, by this time, he becomes competent also to turn stumbling blocks into stepping stones to success.

Effectiveness stands for the style of our living. It is related to both the means and ends of our entire spectrum of activities and occupations. The shape of things coming into being by virtue of our thoughts and actions are associated with our effectiveness in life. It is the yard stick of our constructive thoughts, purposeful actions, influential impact and successful pursuits. Briefly said, effectiveness is the index of successful life. (Anand, 1983)

The effectiveness of the process of education has been squarely acknowledged to depend upon the effectiveness of its teachers. It may not be construed in any way as an exaggeration to remark that it is the teacher's effectiveness which is primarily perceived as the effectiveness of any system of education. It is in this broad framework, that the question of teacher's effectiveness comes under the purview of a detailed X-ray.

The efficiency and competency displayed by teachers in their leadership roles evaluate their effectiveness. This leads as to enunciate that teacher's effectiveness specifies their capability to work for the achievement of the aims and objectives of education and to further strengthen their teaching profession in this endeavor.

Teacher's effectiveness is decidedly governed by a number of factors. It is a multidimensional concept. Excellence in Education and educational organization is the need of the hour. Teacher effectiveness is the essence of a successful educational system. Being an effective teacher means being able to adapt to every situation. For the teaching–learning process to progress in an effective manner, it has to draw the influence of all energizing factors and incorporate the elements of change.

The teacher's relationships with his pupils are of prime importance in effective teaching. To develop a good relationship with the pupils, teachers should have good behaviour. Behaviour is the mirror of personality. It is the personality in action. Personality determines a set of important characteristics and that how people interact with others. Human personality is the combination of a number of traits.

Significance of the Study:

An ideal effectiveness is always considered to be the apex of perfection to be desired and worked for, by all of us in our respective areas of engagements. This utopian reach is characterised by optimum levels of efficiency and productivity on the part of the workmen. In psychological terms, it is the height of maturity and learning in the life span of an individual. At this stage, the person is capable of channelising all his energies in his strides towards the cherished goals. Teacher's effectiveness is decidedly governed by a number of factors. It is a multidimensional concept. Excellence in Education and educational organization is the need of the hour. Teacher effectiveness is the essence of a successful educational system. Being an effective teacher means being able to adapt to every situation. For the teaching–learning process to progress in an effective manner, it has to draw the influence of all energizing factors and incorporate the elements of change. (Mathew, 2008)

In this investigation, effort was made to know the importance of personality for a teacher to be effective. Thus through this investigation, the investigator tried to know the relationship of personality of teachers and teacher effectiveness in science teaching of secondary school students.

Statement of the Problem:

“A Study of Teachers' Personality and Effectiveness in Science Teaching of Secondary Schools in Patna Town.”

Specific Objectives:

1. To study the difference in personality of secondary school teachers belonging to government, private and missionary schools.
2. To study the difference in personality between male and female secondary school teachers.
3. To study the difference in teacher effectiveness in science teaching of secondary school teachers belonging to government, private and missionary schools.

4. To study the difference in teacher effectiveness in science teaching between male and female secondary school teachers.

**Null Hypothesis:**

1. There is no significant difference in personality of secondary school teachers belonging to government, private and missionary schools.

2. There is no significant difference in personality between male and female secondary school teachers.

3. There is no significant difference in teacher effectiveness in science teaching of secondary school teachers belonging to government, private and missionary schools.

4. There is no significant difference in teacher effectiveness in science teaching between male and female secondary school teachers.

**METHOD ADOPTED:**

In any investigation, the method employed is dependent upon the nature of the problem. Since the nature of the problem selected for the present study in concerned with survey type, so the investigator will adopt the survey method to investigate the effect of personality on the teacher effectiveness in teaching of science to secondary school students.

**POPULATION:**

The population of the study was the secondary school teachers in Patna town teaching in the high schools run by government, private and missionary management.

**SAMPLE:**

There are many governments, private and missionary schools in Patna, out of which the investigator has randomly selected 9 schools. The investigator has randomly selected 450 teachers from these schools. These samples were categorized on the basis of sex, economic status, teaching experience and type of the school.

**TOOLS USED IN THE STUDY:**

Following tools were used:

I. Personal data sheet

II. A standardized tool to measure personality of the teachers and

III. A self-constructed and validated tool to measure the teacher effectiveness in science teaching.

**STATISTICAL TREATMENT:**

The data were collected and analyzed by using mean, standard deviation, t-test and ANOVA.

**LIMITATIONS OF THE STUDY:**

I) The present study was limited to small area only.

II) Samples were taken only from a few government, private & missionary secondary schools of urban area.

III) Small samples size was used for the study.

IV) The study has been limited to personality & teacher effectiveness in science Teaching for secondary school students only.
2. RESULTS AND DISCUSSION

Hypothesis 1: There is no significant difference in mean scores of personality of secondary school teachers belonging to government, private and missionary schools. The result are summarized in table 1.

TABLE 1: ANOVA based on Type of Schools

<table>
<thead>
<tr>
<th>Types of School</th>
<th>Sum of Squares</th>
<th>df</th>
<th>Mean or squares</th>
<th>F-ratios</th>
<th>Significance</th>
</tr>
</thead>
<tbody>
<tr>
<td>Between Groups</td>
<td>27.405</td>
<td>2</td>
<td>13.70</td>
<td>2.97</td>
<td>S*</td>
</tr>
<tr>
<td>Within Groups</td>
<td>901.99</td>
<td>447</td>
<td>4.479</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

(S* means significant)

It is inferred from the above table 1 that the calculated value of F, is significant at 1% level of significance. Hence the null hypothesis is rejected. It means there is significant difference between mean scores of personality of secondary school teachers belonging to government, private and missionary schools. However to test inner group difference t-test was applied.

<table>
<thead>
<tr>
<th>Types of school</th>
<th>N</th>
<th>Mean</th>
<th>S.D.</th>
<th>t-ratio</th>
<th>Level of significance</th>
</tr>
</thead>
<tbody>
<tr>
<td>Government</td>
<td>225</td>
<td>121.5</td>
<td>9.5</td>
<td>1.87</td>
<td>NS</td>
</tr>
<tr>
<td>Private</td>
<td>90</td>
<td>123.5</td>
<td>7.5</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Government</td>
<td>225</td>
<td>121.5</td>
<td>9.5</td>
<td>17.74</td>
<td>S</td>
</tr>
<tr>
<td>Missionary</td>
<td>135</td>
<td>135.5</td>
<td>4.4</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Private</td>
<td>90</td>
<td>123.5</td>
<td>7.5</td>
<td>13.68</td>
<td>S</td>
</tr>
</tbody>
</table>

Hypothesis 2: There is no significant difference in mean scores of personality between male and female secondary school teachers. The result are summarized in table 2.

TABLE 2: Mean, SD and t-ratio based on their gender

<table>
<thead>
<tr>
<th>Gender</th>
<th>N</th>
<th>Mean</th>
<th>S.D.</th>
<th>t-ratio</th>
<th>Level of significance</th>
</tr>
</thead>
<tbody>
<tr>
<td>Male</td>
<td>245</td>
<td>176.58</td>
<td>16.05</td>
<td>1.76</td>
<td>NS*</td>
</tr>
<tr>
<td>Female</td>
<td>205</td>
<td>173.59</td>
<td>19.36</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

(NS* means not significant)

It is inferred from the table 2 that the t-value is 1.76 which is less than the table value 1.96 at 0.05 level of significance. Hence the null hypothesis is accepted. It means there is no significant difference in mean scores of personality between male and female secondary school teachers. So, it can be said that the personality of male and female teachers is the same.
Hypothesis 3: There is no significant difference in teacher effectiveness in science teaching of secondary school teachers belonging to government, private and missionary schools.

The result are summarized in table 3

<table>
<thead>
<tr>
<th>TABLE 3 ANOVA based on type of schools</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sum of Squares</td>
</tr>
<tr>
<td>----------------</td>
</tr>
<tr>
<td>Between Groups</td>
</tr>
<tr>
<td>Within Groups</td>
</tr>
</tbody>
</table>

(S* means significant)

It is inferred from the above table 3 that the calculated value of \( F \), is significant at 1% level of significance. Hence the null hypothesis is rejected. It means there is significant difference between mean scores of teacher effectiveness in science teaching of secondary school teachers belonging to government, private and missionary schools. However to test inner group difference t-test was applied.

<table>
<thead>
<tr>
<th>Types of School</th>
<th>N</th>
<th>Mean</th>
<th>S.D.</th>
<th>t-ratio</th>
<th>Level of significance</th>
</tr>
</thead>
<tbody>
<tr>
<td>Private</td>
<td>90</td>
<td>112.4</td>
<td>4.7</td>
<td>4.63</td>
<td>s</td>
</tr>
<tr>
<td>Missionary</td>
<td>135</td>
<td>126.3</td>
<td>7.9</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Government</td>
<td>225</td>
<td>103.6</td>
<td>9.8</td>
<td>22.92</td>
<td>s</td>
</tr>
<tr>
<td>Private</td>
<td>90</td>
<td>112.4</td>
<td>4.7</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Government</td>
<td>225</td>
<td>103.6</td>
<td>9.8</td>
<td>24.07</td>
<td>s</td>
</tr>
<tr>
<td>Missionary</td>
<td>135</td>
<td>126.3</td>
<td>7.9</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Hypothesis 4: There is no significant difference in teacher effectiveness in science teaching between male and female secondary school teachers.

The result are summarized in table 4

<table>
<thead>
<tr>
<th>TABLE4 Mean, SD and t-ratio based on their gender</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gender</td>
</tr>
<tr>
<td>----------</td>
</tr>
<tr>
<td>Male</td>
</tr>
<tr>
<td>Female</td>
</tr>
</tbody>
</table>

(NS* means not significant)
It is inferred from the table 4.6 that the t-value is 1.089 which is less than the table value 1.96 at 0.05 level of significant. Hence the null hypothesis is accepted. It means there is no significant difference in teacher effectiveness in science teaching between male and female secondary School Teachers.

3. CONCLUSION

On the basis of findings of the present study it can be concluded that there was significant difference in the level of personality and in the level of teacher effectiveness in science teaching of secondary School Teachers on the basis of type of school. It was also found that there was no significant difference in the level of personality and in the level of teacher effectiveness in science teaching of secondary School Teachers on the basis of Gender.

As per the mean score of personality it may be concluded that the personality of missionary School Teachers are better than the personality of private and government School Teachers. Gender has no impact on personality as well as teacher effectiveness in science teaching of secondary School Teachers.

REFERENCES