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RELATIONSHIP BETWEEN MULTIPLE INTELLIGENCE, SELF-ESTEEM AND TEACHER COMPETENCY AMONG SECONDARY SCHOOL TEACHERS

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Abstract

The objective of the research study was to find out whether there is any existing relationship between Multiple Intelligence, Self-Esteem and Teacher Competency of Secondary School Teachers of Patna District, Bihar, India. The methodology applied were the survey method with a self-constructed and standardised validated test. The tests utilized were i) The Multiple Intelligence Test a standardised test by Howard Gardner.2) Teacher Effectiveness scale constructed by researcher.3) Self-Esteem Test –A standardised test by M.J. Sorensen. These tests were administered to 500 randomly selected Secondary School Teachers working in schools of Patna, Bihar, India. The data were analysed by employing Mean, Standard Deviation, t-test, Product moment Coefficient of Correlation, ANOVA, Regression, Chi-Square Test and Mann Whitney Test. The findings of the study were:1)There is no significant difference between Male & Female Secondary School Teachers in their Teacher Competency but there is significant difference between Male & Female Teachers in their Multiple Intelligence.2)There is no significant difference between Govt. &Pvt. Secondary School Teachers in their Multiple Intelligence but there is a significant difference between Govt. & Pvt. Secondary School Teachers in their Teacher

Competency as well as Self-Esteem.3) There is a significant positive relationship between Multiple Intelligence and Teacher Competency of Secondary School Teachers.4)There is a significant positive relationship between Multiple Intelligence and Self-esteem of Secondary School Teachers. 5) There is a significant positive relationship between Teacher Competency and Self-esteem of Secondary School Teachers.

Keywords

Multiple Intelligence, Self-Esteem, Teacher Competency & Secondary School Teachers

1. Introduction

The concept of "*intelligence* is a highly discussed topic for all the psychologists". In our day to day life, we define intelligence. But the definition varies from person to person. A teacher has its own definition; a student has its own definition of intelligence. "Monarchic theory defined intelligence as one factor, a store of intellectual knowledge, which is commonly present to all activities of the individual. Multifactor theory considered it to be a combination of a few independent (separate) elements or factors" (Mangal S.K.2002). "Spearman's Two- factor theory involves a general factor 'g' and specific factor 's'. The general factor's' is commonly present in all cognitive functions whereas 's' specific factor belongs to specific (independent) functions. Thus, both the theories hold two extremes. The description of intelligence is based upon one's ability to understand, to think, to solve day today problems and make proper adjustment in the sociocultural environment. Not only this, it is the ability to benefit from the past experiences (Mangal S.K.2002).

According to *Robert Sternberg (1985),* a learner's cognitive functioning depends upon the efficacy to process knowledge or information. Cognitive knowledge includes information-processing, meta-cognitive, executive performance, which helps to acquire knowledge. He further provides the example of people who are quite talented in one area and not in others. In that way, his approach is very similar to *Gardner's theory of Multiple Intelligence*. Sternberg has not focused on single independent intelligence; he wants to develop components of intelligence in the learner to be successful in all the work they perform. He wanted to enhance intelligence in the students through study and practice. (Asthana Bipin 1991).

According to *Thorndike* the intelligence can be compared with skills and several functions which may come under the same kind of ability. So, he refuted the theory of General intelligence. According to him the general (common) term does not exist in intelligence, but in the nature of the

work they accomplish. The positive correlational study between various tests exhibit the fact that some of the features are common in all the tests even they are called as measures of different aspects. So, Thorndike introduced a new term common factor and thoroughly rejected Spearman's two –factor theory. The term common factor is involved in all the work a human being accomplishes in some amount such as bodily-kinaesthetic, spatial, linguistic & logical-mathematical abilities (Asthana Bipin 1991).

Howard Gardner is an American developmental psychologist at Harvard University. He gave his "theory of multiple intelligence" almost eighty years after the development of first Intelligence Test by psychologist Alfred Binet. His famous book "Frames of Mind": The Multiple Intelligence theory (1983) provides a broad base and multiple frames to intelligence. According to him any individual has multiple domains of knowledge which are mainly of seven types and function independently. They are Existential, Naturalistic, Intrapersonal, Interpersonal, Spatial, Bodily-Kinaesthetic, Musical, Logical-mathematical & Linguistics (Mangal S.K. 2002).

Howard Gardner through his multiple intelligence theory proposed a broad view of human potentials, extending from linguistic and logical-mathematical abilities on the one hand, to interpersonal and intrapersonal abilities on the other. However, as far as the broader and global assessment of intellectual competencies and abilities is concerned there is enough truth in the assertion of Gardner's theory that knowledge of at least seven types of intelligence is essential for the true assessment of one's level of intellectual functioning (Mangal S.K.2002)

Multiple Intelligence theory was formed based on two main claims that all human beings have at least seven types of intelligence and that no two people, even identical twins, are of the same profile (Gardner H. 2005). Apart from its theoretical underpinnings. Multiple Intelligence theory was welcomed in educational settings with the hope for putting more students on the right track by considering their strengths and weaknesses (Gardner, 1998/2004). "Multiple Intelligence theory essentially encompasses what good teachers have always in their teaching; reaching beyond the text and the blackboard to awaken students' minds (Armstrong 2000pg39)" (Mangal S.K.2002).

Traditional Educational system mainly focuses on and assesses cognitive and associative abilities of learners. The present global human resource development aims at the holistic development of individuals in the light of the demands and different human abilities that to be developed and assessed during the process in any educational system. Teacher assessment should

be qualitative as well as quantitative; and holistically evaluate knowledge, concepts, pedagogy, attitude, interest of the teachers. Hence assessments of multiple intelligence of teacher trainees were found to be relevant (N.C.F.T.E.2009).

Educationists have long been emphasizing that a standard and single form of education cannot deal with the diversity that nature has placed before us. While we understand and relate to differences in adults, we so often forget to look at them while they are growing up. Multiple Intelligence theory is a theory of education who motivated us to rethink our attitudes towards teaching and learning process in the classroom. Everyone according to him is stronger in one or more types of intelligence and hence is talented differently. So, he proposed a theory that learners have diverse abilities (intelligence), so they interact differently with the diverse world. Evaluating them in a same way is like comparing an actor to a cricket player and saying that former is not a good cricketer and then latter is not a good actor. As teachers we do not look at what our students are good at. Our evaluation patterns systematically help us to find what our students are not good at. Thus, the present theory rejects the theory of one type of intelligence, determining that there are several separate mental abilities in a human being. This theoretical change helps in giving a richer picture about students as well as teacher's abilities and possible successes. Multiple Intelligence theory thus provides more diverse learning experiences, to learn each topic, and be prepared to succeed in a world marked by increasing diversity. At the same time every teacher may have a preferred way of teaching strength. Using their teaching style (in the form of MI) and strategies teachers should suit the student's diverse abilities and attitudes. It provides them with interesting styles that can be used with different stimulation and help them to recognize the dominant intelligence of student and can utilize his intelligence to guide their learning by encouraging their strengths.

1.1 Need & Scope of the Study

Teaching is a complex professional process. The teaching effectiveness can be increased or decreased by a host of factors which includes teaching environment, quality control, accountability, policies programmes, assessment and institutional leadership (Anderson2004). The role of teachers is very significant in moving students towards their desired educational goals. Nevertheless, not only teachers but a no. of variables plays an important role in the teaching – learning process. Teachers are sources of knowledge but by no means they are guarantor of success, because numerous variables might play an impact on the way they organize instruction

(Chason 2005). In this context, teacher's multiple intelligence have received less attention compared to some other variables, such as emotional intelligence and so forth(Chan2004; Moafian and Ghanizadeh, 2009; Rastegar & Memarpour, 2009). In this changing scenario, the learners need, interests play an important role, so the teachers should be sufficiently competent and efficiently equipped to meet the variety of students' needs (Tschannn Moran & Woolfolk Hoy, 2001). By this they can promote the level of the student's achievement (Cantrell, Young & Moore, 2003). The factors which greatly affect the teacher effectiveness might be helpful in enhancing and promoting their willingness for (Allinder, 1994) and commitment to teaching (Coladarci, 1992). The role of teachers nowadays has enormously increased which is not only to instruct and observe the learners but also to evaluate and judge the learners (Yenice N, 2009 Gokci, 2000). So empowering teachers, and to make them aware about their strengths and weaknesses in terms of multiple intelligence is of great help.

Thus, Multiple Intelligence theory opens the door to a wide variety of teaching techniques that are new in the teaching- learning situations. It offers teachers an opportunity to develop an innovative teaching for each and every one. It should be in collaboration with students and teachers. This makes assessment system more interactive and unbiased. The strategies used are in a variety, constructive and mutually interactive. The assessment strategy based on Multiple Intelligence provides multiple ways to evaluate students. Multiple Intelligence theory broadens the assessment arena; and provides a wide range in which a learner can exhibit his competence. In a way multiple intelligence provides a thorough evaluation of the strengths and weaknesses of the learner. This way of assessment technique is quite helpful for a teacher in assessing student learning styles which in turn helps the teacher to employ various teaching methods. A conclusion can be drawn is that the teachers should be well-versed in the teaching subject as well as the students learning styles to help them in teaching –learning process. The teaching and learning process becomes more enjoyable and effective experience for the students. Several studies on Multiple Intelligence are in the nascent stage and are evolving gradually. A research study on this topic is a worthwhile endeavour. Knowledge related to multiple intelligence theory is any day a welcome in the arena of Teacher's training as it helps the teachers to develop their strength and overlook the weaknesses. Intellectual abilities and skills in their strength finally help them to adjust the school environment and eventually respect the child's individual difference well and shape and mould them accordingly in the best way. So those, the students can become better citizens of

tomorrow. Therefore, there is an immense need to make a study in- depth over Multiple Intelligence. The scope of the study lies in the fact that Multiple Intelligence approach is helpful in an educational system that evaluates Intelligence only in terms of Verbal – Linguistic and Logical – Mathematical Intelligence, which is not the right way. Multiple Intelligence instruction caters to all the intelligence and provides a variety in a person's performance thus paves the way towards success for all of them. Further, unleashing the self-esteem level of individuals and teachers leads to the productivity and betterment of the environment and finally the progress of the nation.

1.2 Research Objectives of the Study

The present study is an attempt to investigate the influence of demographic variables (Independent variables) Gender, types of school, qualification, ethnicity, income and Marital status on the Main variables (dependent variables) viz., Multiple Intelligence, Self-esteem and Teacher Competency of the Secondary School Teachers. An attempt was also made to investigate a significant relationship between i) Multiple Intelligence & Self-Esteem ii) Multiple Intelligence & Teacher competency & iii) Self-Esteem & Teacher Competency. The investigation was conducted with a positive approach of impressing educators on the endorsement and inclusion of Multiple Intelligence theory within the Educational System. The problem selected for the present investigation was *"Relationship between Multiple Intelligence, Self-Esteem & Teacher Competency of Secondary School Teachers"*.

General Objectives

1   To find out the level of Multiple Intelligence of Secondary school teachers.
2   To find out the level of Self-Esteem of Secondary school teachers.
3   To find out the level of Teacher Competency of Secondary school teachers.

Specific Objectives

1   To find out any significant difference in Multiple Intelligence of Secondary School Teachers with respect to Gender, type of School, ethnicity, qualification, income, and marital status.
2   To find out any significant difference in Self-Esteem of Secondary School Teachers with respect to Gender, place of living, ethnicity, qualification, income and marital status.
3   To find out any significant difference in Teacher Competency of Secondary School Teachers with respect to Gender, place of living, ethnicity, qualification, income and marital status.
4   To find out the relationship between Multiple Intelligence and Self-Esteem of Secondary School teachers.

5   To find out the relationship between Multiple Intelligence and Teacher Competency of Secondary School teachers.

6   To find out the relationship between Teacher Competency and Self –Esteem of Secondary School teachers.

1.3 Hypothesis

1   There is no significant difference in Multiple Intelligence of Secondary School Teachers with respect to Gender, place of living, ethnicity, qualification, income and marital status.

2   There is no significant difference in Self-Esteem of Secondary School Teachers with respect to Gender, place of living, ethnicity, qualification, income and marital status.

3   There is no significant difference in Teacher Competency of Secondary School Teachers with respect to Gender, place of living, ethnicity, qualification, income and marital status.

4   There is no significant relationship between Multiple Intelligence and Self- Esteem of Secondary School teachers.

5   There is no significant relationship between Multiple Intelligence and Teacher Competency of Secondary School teachers.

6   There is no significant relationship between Self-Esteem and Teacher Competency of Secondary School teachers.

2. Methodology

1   The present study is a survey research.

2   A thorough study of Teacher Competency on identification of skills, abilities and activities related to it were done. For this purpose, various libraries and research tools were referred. Based on the findings, the Teacher Competency scale was constructed by the researcher followed by a pilot study to determine the reliability and validity of the tool.

3   A standardized test of Self-Esteem by J. Sorensen (2006) was used for the measurement of the Self-Esteem. Howard Gardner Multiple Intelligence Scale was used to measure Multiple Intelligence. The data was collected from a population of High school Teachers of Govt. & Pvt. Schools of Patna City.

4   A sample of 500 Secondary School teachers (Govt. & Pvt.) residing in Patna were selected using a random sampling technique.

5   The above sample was collected from twenty-eight (Govt.+Pvt.) high Schools of Patna. It included 267 males & 233 females, 157 govt. & 343 Pvt. Teachers. Among them there were 288 married & 212 Single, 302 undergraduate &198 postgraduate Secondary School Teachers. All the three tests were administered to the students in different sessions, one at a time. The data collected were scored and treated with appropriate statistical techniques.

2.1 Research Tools

"Research Tools" are distinctive ways of describing as well as quantifying the data. (Best J.W. Kahn, James 1995) The researcher has used three research tools for the study:

The Multiple Intelligence Test a standardized test by Howard Gardner

Teacher Effectiveness Scale -a tool constructed by researcher with the help of Prof. (Dr.) Father Thomas Varghese (Guide).

Self-Esteem Test: A standardized test of Self-Esteem by M.J. Sorensen (2006)

 The Statistical Techniques applied were *Mean, t-test, Standard deviation, Co-efficient of Correlation, ANOVA, Chi-Square Test & Mann Whitney Test*.

3. Analysis of Data

Analysis of data is the detailed process of collecting and organizing data or material in order to investigate the underlying facts about it. Garret H.E. (2006) The data are analysed from all sorts or angles to invent new concept about it. An effective analysis requires sharp and intelligent mind of the researcher. (Koul Lokesh 1997).

3.1 Differential Analysis

Null Hypothesis- 1

H0 1: There is no significant difference between male & female Secondary School teachers in their Multiple Intelligence. The analysis of result is given in Table-1.

Table 1: *Difference in the Multiple Intelligence of Male & Female Secondary School Teachers*

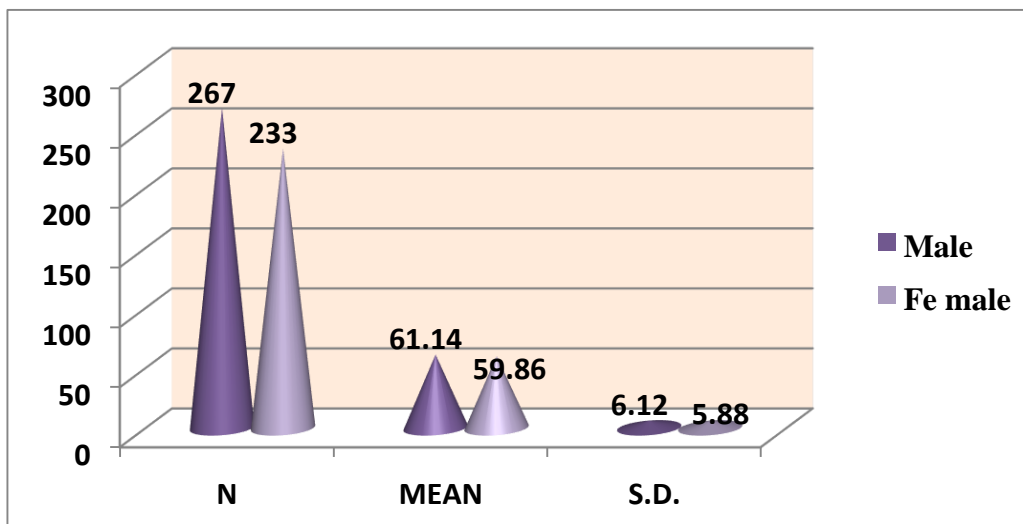| GENDER	N	MEAN	S.D.	t-ratio	Remarks
MALE	267	61.14	6.12	2.37	S*
FEMALE	233	59.86	5.88		

*Significance at .05 level

Figure 1: *Difference in the M.I. of Male & Female Secondary School Teachers*

The Table-1 reveals that t-ratio between mean scores of male and female Secondary School Teachers have been found to be 2.37 which is relevant at .05 level. So, we conclude that there is a significant difference between male and female Secondary School teachers in their Multiple Intelligence.

Null Hypothesis- 2

H0 2: There is not any significant difference between Govt. & Pvt. Secondary School Teachers in their Self- Esteem. The analysis of result is given in Table -2.

Table 2: *Difference in Self-Esteem of Govt. & Pvt. Secondary School Teachers*

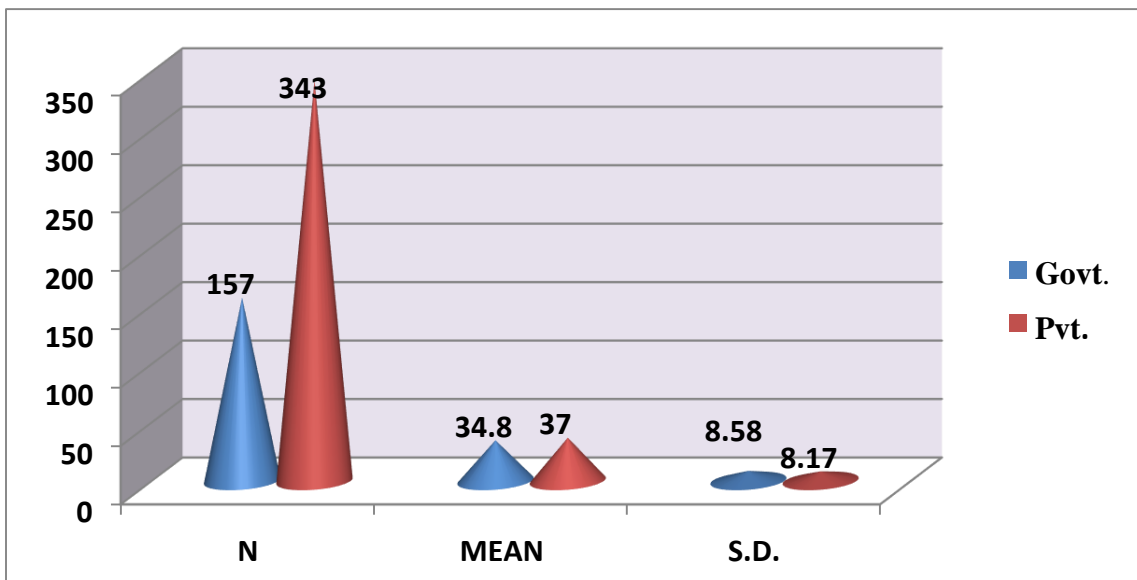| STANDARD	N	MEAN	S.D.	t-value	Remarks
GOVT.	157	34.8	8.58	2 .74	S*
PVT.	343	37	8.17		

*Significance at .01 level

Figure 2: *Difference between Govt. & Pvt. Secondary School Teachers in Self-Esteem*

(At .01 level of Significance the table value of 't' is 2.58.)

The Table – 2 reveals that t-ratio between mean scores of Govt. & Pvt. Secondary School Teachers was found to be 2.74 which was significant at .01 level. So, we conclude that there is a remarkable difference around Govt. & Pvt. Secondary School Teachers in their Self-Esteem.

Null Hypothesis --3

H0 3: There is not any significant difference between Govt. & Pvt. Secondary School Teachers in their Teacher Competency. The analysis of result is given in Table 3.

Table 3: *Difference in Teacher Competency of Govt. & Pvt. Secondary School Teachers*

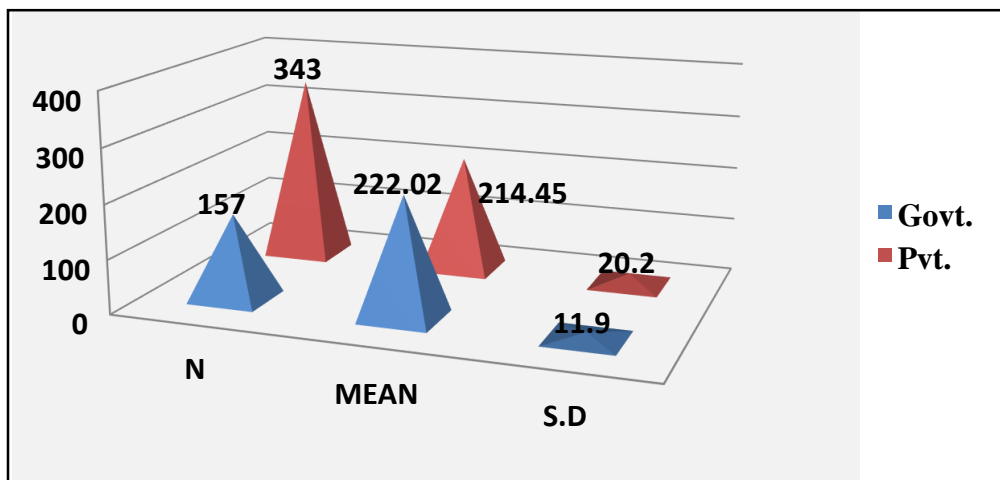| STANDARD	N	MEAN	S. D.	t-ratio	Level of Significance
GOVT.	157	222.02	11.9	4.36	S*
PVT.	343	214.45	20.20		

*Significance at 0.01 level

Figure 3: *Difference between Govt. & Pvt. Secondary School Teachers in their Teacher Competency*

(At 0.01 level of significance the table value of 't' is 2.58.)

The Table-3 reveals that the t-ratio between mean scores of Govt. & Pvt. Secondary School Teachers have been found to be 4.36, which is remarkable significant at 0.01 level. So, we conclude that there is a notable difference between Govt. & Pvt. Secondary School Teachers in their Teacher Competency.

3.2 Correlation Analysis

Null Hypothesis -4

H04: There is not any significant relationship amid multiple Intelligence and Self-Esteem of Secondary School Teachers. The analysis of result is in the Table- 4.

Table 4: *Correlation between Multiple Intelligence & Self-Esteem of Secondary School Teachers*

∑ X	∑X²	∑Y	∑Y²	N	CORRELATION
30271	**1850877**	**18155**	**694115**	**500**	**0.8736***

*Significance at .01 Level.

It is inferred from Table-4. that the calculated r is 0.8736 which is much more than the Table value (0.115) at.01 level of significance. So, the null hypothesis is rejected. It means a remarkable relationship exists amid Multiple Intelligence & Self-Esteem of Secondary School teachers.

Null Hypothesis -5

H05: There is not any significant relationship between Multiple Intelligence & Teacher Competency of High School Teachers.

Table 5: *Correlation between Multiple Intelligence & Teacher Competency of Secondary School Teachers*

∑X	∑X²	∑ Y	∑ Y²	N	CORRELATION
30271	**1850877**	**108412**	**23674272**	**500**	**0.4795***

*Significance at .01 level

It is inferred from Table-5 that the calculated r is 0.4795 which is more than the Table value (0.115) at .01 Level of significance. So, the Null Hypothesis is rejected. It means there is an outstanding relationship around Multiple Intelligence & Teacher Competency of High School Teachers.

Null Hypothesis-- 6

H06: There is not any significant relationship between Self-Esteem & Teacher Competency of High School Teachers.

Table 6: *Correlation between Self-Esteem & Teacher Competency of Secondary School Teachers*

∑X	∑X²	∑Y	∑Y²	N	CORRELATION
108412	23674272	18155	694115	500	0.4216*

*Significance at .01 level

It is inferred, from theTable-6, that the calculated value r, is 0.4216, which is much higher than the Table value (0.115), at .01 level of significance. So, the null hypothesis is rejected. It means a noteworthy relationship exists between Self-Esteem & Teacher Competency of Secondary School Teachers.

4. Findings of the Study

The ultimate purpose of research was to determine the general principles based on the observed and quantified relationship between the Main Variable and the Demographic Variables.

A. *Multiple Intelligence* In view of the findings obtained it was found that most of the Teachers about 94.2% Secondary School Teachers have obtained a moderate level of scores in the Multiple Intelligence scale. Secondly, 5.8% Secondary School Teachers possessed a High level of Multiple Intelligence.

B. *Teacher Competency* From the result obtained 41.4% of the Secondary School Teachers have obtained moderate level of scores in the Teacher Competency Scale. Secondly, a majority of 50.4% of Secondary School teachers have obtained above average level of scores in Teacher Competency. Very few only 8.2% of Secondary School Teachers have obtained low level of scores in the Teacher Competency scale.

C. *Self-Esteem* The outcomes of the study show that 45.2% of the Secondary School Teachers have obtained High level of scores in Self-Esteem Secondly 30.2% Secondary School Teachers have obtained low level of Self-Esteem. Only 24.6% Secondary School Teachers have scored moderate level of Self-Esteem.

The findings of the Hypothesis testing in the present study were as follows:

1) There is no significant difference between Male and Female Secondary School Teachers in their Teacher Competency but there is significant difference between male and female teachers in their Multiple Intelligence.

2) There is no significant difference between Govt. and Pvt. Secondary School Teachers in their Multiple Intelligence but there is significant difference between Govt. and Pvt. Secondary school Teachers in their Teacher Competency as well as Self-esteem.

3) There is a significant positive relationship between Multiple Intelligence and Teacher Competency of Secondary School Teachers.

4) There is significant positive relationship between Multiple Intelligence and Self-esteem of Secondary School Teachers.

5) There is a significant positive relationship between Teacher Competency and Self-esteem of Secondary School Teachers.

5. Conclusion

The present study also concludes that there is a significant positive relationship between Multiple Intelligence & Teacher Competency of Secondary School Teachers. Dr. G. Maheshwari (2017) also tried to find out the relationship between Multiple Intelligence & Teaching Competency of training College teachers and found out that there is a significant positive correlation between Multiple Intelligence & Teacher Competency. This may be because the teachers, those who are acknowledged or respected for their abilities, their multiple intelligence, and their sense of self-esteem is likely to increase which will further strengthen teacher competency. From this study the researcher concluded and identified that multiple intelligence is also one of the significant contributors of the teacher's competency. Hence training the teachers to use the multiple intelligence in their teaching learning process can be very useful to enhance the student's learning.

5.1 Recommendation

1. Teachers should be aware of their own prominent Multiple Intelligence and must utiliz**e** it accordingly in teaching –learning process.

2. It is essential to have full knowledge of multiple intelligence theory before utilizing them into lesson plans.

3. Teachers should give equal importance to different intelligence displayed by the students and never discriminate between them in anyways.

4. School should fully support the initiatives of teachers who utilize **multiple intelligence** theory in teaching practices.

5. Multiple Intelligence can be used as a useful teaching technique to improve teaching and learning effectiveness.

6. The future studies should be based upon the difficulty in application of Multiple Intelligence. Studies should be based upon careful observation, video recording, and an in-depth interview of students. It can be an eye-opener to the problems faced by the researcher in the application of Multiple Intelligence teaching.

7. The Multiple Intelligence theory can be applicable to everyone. It can be a remedial method to utilize prominent intelligence of the student to improve learning process.

8. Studies on the use of Co-operative learning in the teaching-learning scenario must be encouraged.

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