

TEACHING COMPETENCY OF STUDENT TEACHERS IN RELATION TO THEIR EMOTIONAL MATURITY

J. Sheela¹, Dr. K.K. Rajendran²

¹Research Scholar, Department of Education, Bharathidasan University, Tiruchirappalli - 620 024

²Associate Professor, Department of Education, Bharathidasan University, Tiruchirappalli - 620 024

Email ID: brijilal@gmail.com¹, rajendrankarthik76@gmail.com²

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ABSTRACT: Education is a character building process, which enhances one's personality and makes one rational, capable, responsive and intelligently dependent. One of the main aims of education is to produce good teachers and students. The teachers help the students to acquire not only the right knowledge, but also values, attitudes, habits and skills that are necessary to cope with the world of tomorrow. Teaching competency is complex and many sided, demanding a variety of human traits and abilities. It identifies a single level of proficiency or a range of levels determined through theoretical or empirical process at which a teacher must perform. Similarly, the awareness of one's emotional maturity in terms of emotional quotient has wide educational and social implication for the welfare of the individual and society. Emotionally matured teachers have the ability to marshal their emotional impulses; they develop adequate self awareness to know what they are feeling and are able to think about and express those things. Emotionally matured teacher has always been a key person of the success of every student's life. In fact, emotional maturity enriches the power of one's teaching competency as emotional maturity is one of the important aspects of teaching competency. The present scenario necessitates the teachers with emotional maturity, which helps them to increase their teaching competency.

The main objective of the present study is to find out the relationship between teaching competency and emotional maturity of student teachers. The population of the present study consisted of student teachers of B.Ed. colleges in Kanyakumari District of Tamil Nadu, India. The investigator adopted survey method of research to study the relationship between the variables and used stratified random sampling technique for collecting the required data. The sample for the present study consisted of 300 student teachers (both men and women) from eight colleges of education. Teaching Competency Scale developed and validated by **Baskar** (2012) and Emotional Maturity Scale developed and validated by **Roma Pal** (2010) were used for collecting the required data from the population. The data were analyzed by 't' test and Karl Pearson's product moment correlation test. The major findings revealed that there was significant positive relationship between teaching competency and emotional maturity of student teachers.

I. INTRODUCTION

Now-a-days, the concept of teacher education is undergoing a rapid change and it is no longer mere training as conceived earlier. It means the acquisition of that type of knowledge of information, skill and ability which help a teacher to discharge his professional duties and responsibilities effectively and efficiently. It shapes and reshapes the attitude, habits and personality of a teacher. In a nutshell, teaching competency is the skill, ability and capabilities possessed by the teacher so as to make the teaching-learning environment effective and productive thereby making the teacher as well as the students realize their full potentials in achieving the desired goals of education. Similarly, emotional maturity allows one to think more creatively and use one's emotions to solve problems. **Daniel Goleman** (1995) believes that emotional maturity appears to be an important set of psychological abilities that relate to success in life. Emotional development is totally concerned with the development of the various positive and negative emotions and the ways and manners they are being expressed. On the one hand, it is firmly enunciated that emotionally mature persons are aware of their every action and on the other hand, emotionally immature persons react in immature ways as emotional maturity is the ability to communicate with others and the skill to handle one's feelings effectively. Uncontrolled emotions badly disturb the personality development of a person. With reference to the teachers, emotional maturity is the kind of social intelligence, which involves the skill to monitor and govern their own and their students' emotions.

II. NEED AND SIGNIFICANCE OF THE STUDY

Teachers are said to be the architects of the future generations. They can act as role models in the lives of learners and guide them in the process of education for development. If teachers acquire professional competencies and commitments and if they are enabled and empowered to perform their multiple tasks in the class room, then a chain of reaction can begin starting with a sound teacher performance embellished with effective teaching competencies culminating into quality learning among students in cognitive, affective and psychomotor areas of human development. The qualities of the competency are enthusiasm, fluency, industry, neatness, originality, adaptability, thrift and higher level conceptualizations. At a professional level, competence in teaching requires performance skills and academic and theoretical backgrounds. To be precise, teaching competencies are functional abilities of teachers to prove their teaching efficiency. Thus teaching competency would mean effective performance of all observable teacher behaviour that brings about desired outcome among pupil. Generally, the ability of teachers to implement successful teaching style is the result of their behavioural responses and interactions to a particular situation. In fact, one's behaviour consists of feelings, actions and thoughts which are in direct relationship with his/her degree of emotional maturity. Emotional maturity is an integral component of one's successful teaching. According to **F. L. Ruch**, "The meaning of emotion is intense feeling or agnation and such agnation can be happy or sad" The term 'emotion' refers to a feeling and its distinctive thoughts, psychological and biological states and a range of propensities to act, **Goleman** (1995). The role of emotions in every individual's life is as important as his/her life itself. If a person is emotionally mature, he can go ahead. Emotional maturity can help teachers to understand the psychological character of students and their teaching approaches in the classroom. It enriches the power of one's teaching competencies. A teacher with good teaching competency will not be satisfied with the students' grasp of facts and their recall, but the diverse ways of arriving at facts, by deduction, induction, problem-solving, discussion, experimentation and observation. They will try to make the pupils not just conformists or imitators, but as people who think for themselves. Emotionally matured teachers will guide the creative efforts of their students without imposing their will on them. Emotionally matured teachers have the ability to marshal their emotional impulses, they develop adequate self awareness to know what they are feeling and are able to think about and express those things. Apart from this, emotionally matured teachers have a clear perception of their roles in a fast changing ambience. Inspired by the significance of the conceptual facts and the practical benefits of teaching competency and emotional maturity for the profession of teaching, the Investigator wishfully makes an attempt of finding out the relationship between teaching competency and emotional maturity of student teachers with respect to certain background variables.

III. STATEMENT OF THE PROBLEM

The awareness of a teacher's emotional maturity has wide educational and social implication for the welfare of the individual and society. If a teacher is capable of teaching efficiently with emotional maturity, he can be considered as a good teacher. It is the ability of a teacher to see a problem, then solve a problem or make something that is useful to the students. It is also true that one's behavior is constantly influenced by the level of emotional maturity one possesses. Efficient teachers have always been a hallmark of the development of students and effective teachers require a new type of knowledge, attitude, atmosphere and facility to make their task easy, fruitful and very confirming according to the demands of the students and the society. But emotionally matured teachers will not be contented with merely telling the facts, but will require a judgement on the facts and the use of these facts, which can be put to use for the betterment of their own lives and that of others. An emotionally matured teacher can understand the needs of his/her students and provide them with ample opportunities to exercise his/her creative talents constructively. In this context, emotionally matured teacher educators play bigger and crucial roles of incorporating, sustaining and transmitting essential teaching competencies and cultivating emotional maturity in their student teachers. It really means the acquisition of that type of knowledge, maturity, skills and competencies, which could enable a teacher to be successful in his profession. It replenishes and reshapes the competencies, attitudes, emotionality and personality of a teacher into newer forms. One of the main aims of education is to produce good students for that it is essential to produce competent teachers. Hence the present study.

TITLE OF THE STUDY

"Teaching Competency of Student Teachers in relation to their Emotional Maturity"

OPERATIONAL DEFINITIONS

Teaching Competency

According to **Umarani** (2001), "Teaching competency means an ability of a teacher to facilitate behavioural changes in learning" 'Teaching Competency' is the skill, ability and capabilities possessed by the teacher so as to make the teaching-learning environment effective and productive thereby realising the full potential of a

teacher as well as students and in turn achieving the goals of education. It includes three dimensions namely efficacy in teaching, use of appropriate techniques and teaching aids and rapport with students and other teachers.

Emotional Maturity

Monique Judge (2017) remarked, “Emotional maturity is the ability to handle situations without unnecessarily escalating them. Instead of seeking to blame someone else for their problems or behavior, emotionally mature people seek to fix the problem or behavior. They accept accountability for their actions.”

In the present study, emotional maturity was considered as the ability to empathize, share, listen, take responsibility for one's own behaviour and care about the feelings and needs of others.

Student Teachers

By ‘Student Teachers’, the investigator meant the students studying in the Colleges of Education (B.Ed., Programme) in Kanyakumari District of Tamil Nadu State, India

Objectives of The Study

The following are the objectives of the present study:

- i. To find out the level of teaching competency of student teachers.
- ii. To find out the level of emotional maturity of student teachers.
- iii. To find out whether there is any significant difference among student teachers in their teaching competency with regard to the background variables namely: (i) Gender (Men and Women), (ii) Subject (Arts group and Science group), (iii) Educational Qualification (UG and PG), (iv) Marital Status (Married and Unmarried) and (v) Locality of School (Rural and Urban).
- iv. To find out whether there is any significant difference among student teachers in their emotional maturity with regard to the background variables namely: (i) Gender (Men and Women), (ii) Subject (Arts and Science), (iii) Educational Qualification (UG and PG), (iv) Marital Status (Married and Unmarried) and (v) Locality of School (Rural and Urban).
- v. To find out whether there is any significant relationship between teaching competency and emotional maturity of student teachers.

METHOD USED FOR THE STUDY

The investigator adopted survey method of research to study the relationship between emotional maturity and teaching competency among student teachers.

POPULATION

The population of the present study consisted of student teachers from B.Ed. colleges in Kanyakumari District of Tamil Nadu State, India.

SAMPLE

The sample for the present study consisted of 300 student teachers (both men and women) from eight Colleges of Education of Kanyakumari District of Tamil Nadu, India was selected by means of stratified random sampling technique.

TOOLS USED IN THE STUDY

Teaching Competency Scale developed and validated by **Baskar** (2012) and Emotional Maturity Scale developed and validated by **Roma Pal** (2010) were used for collecting the required data from the population.

STATISTICAL TECHNIQUES

The investigator used Mean, Standard Deviation, ‘t’ test and Karl Pearson’s Product Moment Correlation for analyzing the data.

ANALYSIS OF DATA

Level of Teaching Competency of Student Teachers

Table 12.1 LEVEL OF TEACHING COMPETENCY OF STUDENT TEACHERS

High		Average		Low	
No	%	No	%	No	%
51	17	194	64.7	55	18.3

From the Table 12.1 it is inferred that 17% of student teachers had high level of teaching competency, 64.7% and 18.3% of student teachers had average and low level of teaching competency respectively.

Level of Emotional Maturity of Student Teachers

Table 12.2 LEVEL OF EMOTIONAL MATURITY OF STUDENT TEACHERS

High		Average		Low	
No	%	No	%	No	%
75	25	179	59.7	46	15.3

From the Table 12.2 it is inferred that 25% of student teachers had high level of emotional maturity, 59.7% and 15.3% of student teachers had average and low level of emotional maturity respectively.

Null Hypothesis: 1

There is no significant difference between men and women student teachers in their teaching competency.

Table 12.3 DIFFERENCE BETWEEN MEN AND WOMEN STUDENT TEACHERS IN THEIR TEACHING COMPETENCY

Variable	Gender	N	Mean	SD	Calculated 't' Value	Remarks at 5% level
Teaching Competency	Women	184	121.66	13.029	0.22	NS
	Men	116	121.31	13.632		

(The table value of 't' at 5% level of significance is 1.96)

It is inferred from the above table 12.3 that there was no significant difference between men and women student teachers in their teaching competency as the calculated t-value 0.22 was less than the table value 1.96 at 5% level of significance. Hence the null hypothesis was accepted.

Null Hypothesis: 2

There is no significant difference between arts group and science group student teachers in their teaching competency.

Table 12.4 DIFFERENCE BETWEEN ARTS GROUP AND SCIENCE GROUP STUDENT TEACHERS IN THEIR TEACHING COMPETENCY

Variable	Subject	N	Mean	SD	Calculated 't' Value	Remarks at 5% level
Teaching Competency	Arts	150	121.79	15.097	0.267	NS
	Science	150	122.24	14.304		

(The table value of 't' at 5% level of significance is 1.96)

It is inferred from the above Table 12.4 that there was no significant difference between arts group and science group student teachers in their teaching competency as the calculated t-value 0.267 was less than the table value 1.96 at 5% level of significance. Hence the null hypothesis was accepted.

Null Hypothesis: 3

There is no significant difference between UG and PG student teachers in their teaching competency.

Table 12.5 DIFFERENCE BETWEEN UG AND PG STUDENT TEACHERS IN THEIR TEACHING COMPETENCY

Variable	Educational Qualification	N	Mean	SD	Calculated 't' Value	Remarks at 5% level
Teaching Competency	UG	279	122.68	14.348	2.906	S
	PG	21	113.14	16.521		

(The table value of 't' at 5% level of significance is 1.96)

It is inferred from the above Table 12.5 that there was significant difference between UG and PG student teachers in their teaching competency as the calculated t-value 2.906 was less than the table value 1.96 at 5% level of significance. Hence the null hypothesis was rejected.

Null Hypothesis: 4

There is no significant difference between married and unmarried student teachers in their teaching competency.

Table 12.6 DIFFERENCE BETWEEN MARRIED AND UNMARRIED STUDENT TEACHERS IN THEIR TEACHING COMPETENCY

Variable	Marital Status	N	Mean	SD	Calculated 't' Value	Remarks at 5% level
Teaching Competency	Married	25	123.88	16.962	0.663	NS
	Unmarried	275	121.84	14.482		

(The table value of 't' at 5% level of significance is 1.96)

It is inferred from the above Table 12.6 that there was no significant difference between married and unmarried student teachers in their emotional maturity as the calculated t-value 0.663 was less than the table value 1.96 at 5% level of significance. Hence the null hypothesis was accepted.

Null Hypothesis: 5

There is no significant difference between rural and urban college student teachers in their teaching competency.

Table 12.7 DIFFERENCE BETWEEN RURAL AND URBAN COLLEGE STUDENT TEACHERS IN THEIR TEACHING COMPETENCY

Variable	Locality of the College	N	Mean	SD	Calculated 't' Value	Remarks at 5% level
Teaching Competency	Rural	140	121.24	14.433	0.850	NS
	Urban	160	122.69	14.911		

(The table value of 't' at 5% level of significance is 1.96)

It is inferred from the above Table 12.7 that there was no significant difference between rural and urban college student teachers in their teaching competency as the calculated t-value 0.850 was less than the table value 1.96 at 5% level of significance. Hence the null hypothesis was accepted.

Null Hypothesis: 6

There is no significant difference between men and women student teachers in their emotional maturity.

Table 12.8 DIFFERENCE BETWEEN MEN AND WOMEN STUDENT TEACHERS IN THEIR EMOTIONAL MATURITY

Variable	Gender	N	Mean	SD	Calculated 't' Value	Remarks at 5% level
Emotional Maturity	Women	184	22.88	4.409	2.5	S
	Men	116	21.43	5.153		

(The table value of 't' at 5% level of significance is 1.96)

It is inferred from the above Table 12.8 that there was significant difference between men and women student teachers in their emotional maturity as the calculated t-value 2.5 was greater than the table value 1.96 at 5% level of significance. While comparing the mean scores, women teachers were rated higher than men teachers in their emotional maturity. Hence the null hypothesis was rejected.

Null Hypothesis: 7

There is no significant difference between arts group and science group student teachers in their emotional maturity

Table 12.9 DIFFERENCE BETWEEN ARTS GROUP AND SCIENCE GROUP STUDENT TEACHERS IN THEIR EMOTIONAL MATURITY

Variable	Subject	N	Mean	SD	Calculated 't' Value	Remarks at 5% level
Emotional Maturity	Arts	150	20.98	3.574	2.910	S
	Science	150	22.07	2.854		

(The table value of 't' at 5% level of significance is 1.96)

It is inferred from the above Table 12.9 that there was significant difference between arts group and science group student teachers in their emotional maturity as the calculated t-value 2.910 was greater than the table value 1.96 at 5% level of significance. While comparing the mean scores, science group student teachers were rated higher than arts group student teachers in their emotional maturity. Hence the null hypothesis was rejected.

Null Hypothesis: 8

There is no significant difference between UG and PG student teachers in their emotional maturity

Table 12.10 DIFFERENCE BETWEEN UG AND PG STUDENT TEACHERS IN THEIR EMOTIONAL MATURITY

Variable	Educational Qualification	N	Mean	SD	Calculated 't' Value	Remarks at 5% level
Emotional Maturity	UG	279	21.62	3.305	1.873	NS
	PG	21	20.24	2.567		

(The table value of 't' at 5% level of significance is 1.96)

It is inferred from the above Table 12.10 that there was no significant difference between UG and PG student teachers in their emotional maturity as the calculated t-value 1.799 was less than the table value 1.96 at 5% level of significance. Hence the null hypothesis was accepted.

Null Hypothesis: 9

There is no significant difference between married and unmarried student teachers in their emotional maturity.

Table 12.11 DIFFERENCE BETWEEN MARRIED AND UNMARRIED STUDENT TEACHERS IN THEIR EMOTIONAL MATURITY

Variable	Marital Status	N	Mean	SD	Calculated 't' Value	Remarks at 5% level
Emotional Maturity	Married	25	20.40	3.329	1.799	NS
	Unmarried	275	21.63	3.256		

(The table value of 't' at 5% level of significance is 1.96)

It is inferred from the above Table 12.11 that there was no significant difference between married and unmarried student teachers in their emotional maturity as the calculated t-value 1.799 was less than the table value 1.96 at 5% level of significance. Hence the null hypothesis was accepted.

Null Hypothesis: 10

There is no significant difference between rural and urban college student teachers in their emotional maturity

Table 12.12 DIFFERENCE BETWEEN RURAL AND URBAN COLLEGE STUDENT TEACHERS IN THEIR EMOTIONAL MATURITY

Variable	Locality of the College	N	Mean	SD	Calculated 't' Value	Remarks at 5% level
Emotional Maturity	Rural	140	21.88	3.340	1.764	NS
	Urban	160	21.21	3.193		

(The table value of ‘t’ at 5% level of significance is 1.96)

It is inferred from the above Table 12.12 that there was no significant difference between rural and urban college student teachers in their emotional maturity as the calculated t-value 1.764 was less than the table value 1.96 at 5% level of significance. Hence the null hypothesis was accepted.

Null Hypothesis: 11

There is no significant relationship between teaching competency and emotional maturity of student teachers.

Table 12.13 RELATIONSHIP BETWEEN TEACHING COMPETENCY AND EMOTIONAL MATURITY OF STUDENT TEACHERS

Calculated ‘r’ value	Table Value	Remarks at 5% level
0.306	0.113	S

(The table value of r at 5% level of significance is 0.113)

It is inferred from the above Table 12.13 that there was significant positive relationship between teaching competency and emotional maturity of student teachers as the calculated ‘r’ value 0.306 was greater than the table value 0.113 at 5% level of significance. Hence the null hypothesis was rejected.

IV. MAJOR FINDINGS

1. The level of emotional maturity of student teachers was average.
2. The level of teaching competency of student teachers was average.
3. There is no significant difference between men and women student teachers in their teaching competency.
4. There was no significant difference between arts group and science group student teachers in their teaching competency.
5. There was significant difference between UG and PG student teachers in their teaching competency. While comparing the mean scores, UG student teachers were rated higher than PG student teachers in their teaching competency.
6. There was no significant difference between married and unmarried student teachers in their teaching competency.
7. There was no significant difference between student teachers of rural and urban colleges in their teaching competency.
8. There was significant difference between men and women student teachers in their emotional maturity. While comparing the mean scores, women student teachers were rated higher than men student teachers in their emotional maturity.
9. There was no significant difference between UG and PG student teachers in their emotional maturity.
10. There was significant difference between arts group and science group student teachers in their emotional maturity. While comparing the mean scores, science group student teachers were rated higher than arts group student teachers in their emotional maturity.
11. There was no significant difference between married and unmarried student teachers in their emotional maturity.
12. There was no significant difference between student teachers of rural and urban colleges in their emotional maturity.
13. There was significant relationship between teaching competency and emotional maturity of student teachers.

V. INTERPRETATIONS AND DISCUSSION

The results of the percentage analysis revealed that majority of the student teachers had moderate level of **teaching competency** and **emotional maturity** ensuring the homogeneity of the population, the perfect representation of the sample and the reliability of the sampling technique used. The findings of the study conducted by **Ramesh & Annaraja** (2010) on the teaching competency of B.Ed. students in reported moderate level of teaching competency, which was in accordance with the moderate level of teaching competency and emotional maturity among student teachers of the present research. Similarly, **Ranjini & Mohanasundaram** (2012) found that the levels of teacher’ competency and academic achievement of secondary trainees were average. **Soniya** (2013) investigated the relationship between communicative behaviour and teaching competency and observed that the level of teaching competency of high school teachers was average. **Sairabanu Daragad et al.** (2016) made an assessment on selected dimensions of emotional maturity among school children and the study concluded that majority of boys and girls reported moderate level of emotional maturity which supported the findings of the present research. **Sheela & Rajendran** (2020) analysed the

relationship between internet addiction and emotional maturity among higher secondary students and concluded that majority of higher secondary students reported emotional maturity at moderate level. The prevalence of emotional maturity at moderate level among student teachers might be because of their tendency to enjoy their happiness and other wishful sharing with others amidst their tight responsibilities and academic activities, which would be of their vision and mission whether they are married or unmarried. The findings of the reviewed related research studies confirmed the moderate level of teaching competency and emotional maturity among student teachers of the present research. The 't' test results regarding the variable '**Teaching Competency**' revealed that there was no significant difference in the teaching competency of student teachers with regard to the back ground variables namely, gender (men and women), subject (arts group and science group) and marital status (married and unmarried) of the student teachers and the locality of the college (urban and rural). But there was significant difference in the teaching competency of the student teachers with respect to their educational qualification namely, Under Graduation and Post Graduation. The under graduate student teachers were rated higher than the post graduate student teachers in their teaching competency. The reason would be that the student teachers with under graduation are fresh in their subject knowledge and multidisciplinary in their allied subjects rather than their post graduate counterparts parts. Their expositions with the allied subjects and other extra-disciplinary subjects help them employing their teaching competencies in a better manner than their post graduate counterparts parts. The following are the findings of the related studies that support the findings of the present research. The findings of the research conducted by **Mani & Mohan** (2005) revealed that there was no significant difference in the teaching competency of teacher trainees with regard to age, gender, optional subject, locality and nature of school, which were in accordance with the findings of the present study. The findings of the study conducted by **Fabila Josephine & Alphonse Raj** (2008) revealed that there was no significant difference among B.Ed. students with respect to gender (men & women), locality (urban & rural) and subject (arts and science) in their teaching competency of students of B.Ed. colleges which were in accordance with the findings of the present study. And there was significant difference between UG and PG B.Ed., students in their teaching competency, which supported the findings of the present research. Similarly, the investigation made by **Jose Augustine** (2010) revealed that gender of the students and the locality of the institutions did not show any influence on their teaching competency. **Ramesh & Annaraja** (2010) conducted a comparative study on teaching competency of male and female B.Ed. students of distance education and found no significant difference between male and female B.Ed. students in their teaching competency. **Kanakala Jayaram** (2010) reported that demographic variables like age, gender and locality did not influence the professional competency of teachers. **Sheeja.V & Annaraja** (2011) examined the teaching competency of secondary teacher education students and found no significant difference in their teaching competency across gender and locality of institution, which was similar to the findings of the present study. **Jagannadh** (2011) conducted a research on teaching competency and attitude towards teaching profession of B.Ed. college students and the results revealed no significant difference in their teaching competency across gender and locality of institution which were similar to the findings of the present research. **Sivasankar** (2013) studied the relationship between social intelligence and teaching competency of higher secondary school teachers and the results reported no significant difference with regard to gender of higher secondary school teachers and locality and nature of school, which were in accordance with the findings of the present research. **Arti Talwar & Mandeep Kaur** (2014) analysed the teaching competency of secondary school teachers in relation to emotional intelligence. The findings reported that there was no significant difference between male and female secondary school teachers in their teaching competency and emotional intelligence. **Sivakumar & Edward William Benjamin** (2016) studied emotional intelligence, teaching competency and professional development of teacher educators in B.Ed., colleges. The findings were that there was no significant difference in teaching competency between male and female teacher educators of B.Ed. colleges and there was no significant difference between the teacher educators of rural urban B.Ed. colleges in their teaching competency which supported the findings of the present study. **Ashok Kumar & Rajendran** (2016) examined mental health and professional competencies of high school teachers and the findings revealed that there was no significant gender based and locality based differences among high school teachers in their professional competencies. In the same manner, **Ashok Kumar & Rajendran** (2017) studied social cognition and professional competencies of B.T Assistant and the findings revealed that there was no significant difference among B.T Assistant in their professional competencies with respect to their marital status, subject handled by them, nature of school and locality of school, which were in accordance with the findings of the present research. On the contrary to the findings of the present research, the study conducted by **Dorothy Rani & Annaraja** (2000) revealed the existence of significant difference between men and women primary school teachers in their teaching competency. **Kala Vincila** (2009) studied the teaching competency of D.T.Ed. students and found no significant difference in their teaching competency across gender of the students, locality and type of institution. Similarly, the study conducted by **Thamilmani & Thangasamy** (2000) on higher secondary school teachers and the study conducted by **Mani & Mohan** (2005) on B.Ed., teacher trainees indicated the existence of significant difference with regard to gender. Similarly, the investigation undertaken by **Julie Eben & Sebastian** (2007) showed

significant difference between the teachers of rural and urban schools for mentally challenged. The study conducted by **Velmurugan & Rajendran** (2014) on B.Ed., trainees showed significant difference with respect to their gender, locality, nature and type of college of education in their teaching competency, which did not support the findings of the present study. **Julie Eben & Sebastian** (2007) studied the teaching competency of teachers in the schools for the mentally challenged and found that there was significant difference between rural and urban school teachers and married and unmarried teachers in their teaching competency which did not support the findings of the present research. **Beula Johns & Annaraja** (2008) studied the impact of awareness of information technology and self-esteem on teaching competency and pedagogical content knowledge of the B.Ed. students. The findings revealed that there was significant difference between male and female B.Ed. students in their teaching competency. Similarly, **Singaravelu** (2008) studied the teaching competency of D.T.Ed. students and found that there was significant difference in the mean-score by their gender and type of school.

Naree et al. (2009) conducted a research on school teachers' competency in Thailand and the findings revealed that the teacher' competency was high for the students living on the borders of the country. **Shukla** (2010) studied the effect of simulated practice teaching on teaching competency of the student teachers of B. Ed. colleges and concluded that there was no significant difference between Under Graduate (UG) and Post Graduate (PG) student teachers in their teaching competency, which was not in accordance with the findings of the present research. **Sahayarani et al.** (2011) assessed the attitude of B.Ed. trainees towards teaching profession and achievement in teaching competency and found that there was significant difference in the teaching competency between arts and science, rural and urban B.Ed. trainees which were not in accordance with the findings of the present research. Similarly, **Surajit Mahanta** (2012) examined the professional competence of teachers across gender and locality. The study revealed that there was significant difference between male and female teachers in their professional competence, which was contrary to the findings of the present research. In the same manner, **Ranjini & Mohanasundaram** (2012) studied teachers' competencies and academic achievement of secondary teacher trainees and found that there was significant difference in teacher competencies and academic achievement with regard to gender. The findings of the study conducted by **Himabindu** (2012) revealed that there was significant difference among junior college lecturers with regard to the variables namely, gender, marital status and teaching experience of lecturers, type and locality of institution and age categories. **Soniya** (2013) studied the relationship between communicative behaviour and teaching competency of high school teachers and found significant difference between male and female teachers in their teaching competency, which was contrary to the findings of the present research. Similarly, **Nur Mustafa** (2013) assessed professional competency among high school teachers in Indonesia and found that the professional competency among female teachers, which was higher than male teachers. **Surya Vasan et al.**, (2014) conducted a study on teaching competence and teaching style of primary school teachers and found significant difference between male and female primary school teachers with regard to teaching competence. **Binualal** (2015) assessed the emotional intelligence of student teachers in relation to their social skills and teaching competency and found that there was significant difference in the teaching competency of student teachers with respect to locality and educational qualification. **Somraj & Ajmer Singh Malik** (2017) examined professional competence and performance of teachers in higher education. The findings indicated that there was significant difference in the professional competence of male and female teachers of higher education. **Mohammed Ahmad Khan & Jarrar Ahmad** (2017) conducted a study on teaching competency of secondary school teachers in relation to their teaching aptitude, emotional intelligence and adjustment. The findings reported that there was significant difference between male and female and arts and science secondary education teachers in their teaching competency which did not support the findings of the present study. **Ashok Kumar & Rajendran** (2017) studied social cognition and professional competencies among B.T assistant teachers and the findings revealed that there was significant difference between men and women B.T Assistants in their professional competencies. Similarly, **Ashok Kumar & Rajendran** (2018) assessed the attitude of secondary education teachers towards teaching in relation to their professional competencies. The findings reported that there was significant difference between men and women, rural and urban, government and government aided school secondary education teachers in their professional competencies, which did not support the findings of the present study. The 't' test results regarding the variable 'Emotional Maturity' revealed that there was no significant difference in the emotional maturity of student teachers with regard to the back ground variables namely, marital status (married and unmarried) and educational qualification (UG and PG) of the student teachers and the locality of the college (urban and rural). But there was significant difference in the teaching competency of the student teachers with respect to their gender and subject. The women student teachers were rated higher than the men student teachers in their teaching competency. It is because of the natural fact that the individuals of feminine gender attain their physiological as well as emotional maturity even before their masculine counter parts having attained them. Accordingly, the women student teachers could express their emotional maturity and related features better in all aspects whether they are married or unmarried.

The inherent motherhood in them and the family bound responsibilities and commitments mould the entire women folk to stand higher than men folk with reference to emotional maturity and related aspects. With regard to the subject, science group student teachers were rated higher than arts group student teachers in their emotional maturity. The science subject by virtue of its quality and uniqueness enabled science group student teachers to think and express in an emotionally better way than their arts group counter parts. The following are the findings of the related studies that support the findings of the present research. The results of the study conducted by **Sunil Kumar** (2014) on emotional maturity of adolescent students reported that there was significant difference between adolescent boys and girls in their emotional maturity which was similar to the findings of the present study. Similarly, **Yolila Sangtam & Talawar** (2014) conducted a study of academic achievement, study involvement and emotional maturity among secondary school tribal students of Nagaland and found significant difference in the emotional maturity between tribal boys and girls, which supported the findings of the present study. The study conducted by **Smriti Kiran Saimons et al.** (2016) on adolescent boys and girls found that there was significant difference between the adolescent boys and girls on the effect of emotional maturity. Similarly, **Shafiq & Rubeena Khan** (2016) studied the emotional maturity of adolescents from nuclear and joint families and observed that there was significant difference between male and female adolescents on the measure of emotional maturity, which was in accordance with the present research. **Menaka** (2016) made an investigation on teacher effectiveness of secondary school teachers in relation to their emotional maturity. The study clearly indicated that there was significant difference between male and female secondary school teachers in their emotional maturity, which supported the findings of the present research. The results of the study conducted by **Smriti Kiran Saimons et al.** (2016) on the effect of emotional maturity on self-concept of adolescents indicated that there was a significant difference in the effect of emotional maturity between adolescent boys and girls. **Vinitha & Lal Kumar** (2017) conducted a study on emotional maturity of graduate students and found that there was no significant difference in the emotional maturity among graduate students with respect to gender. **Yashoda & Kalyani Devi** (2017) studied the influence of parental employment, grade and gender on emotional maturity of adolescents and the results reported a significant difference between the emotional maturity of adolescent male and female students which was in accordance with the findings of the present research. **Sarvjeet Kaur Brar** (2017) conducted a study on altruistic behaviour among adolescents in relation to their emotional maturity and found that there was significant difference in the emotional maturity among male and female adolescent students which was in accordance with the findings of the present research. The findings of the study undertaken by **Vinitha and Lal Kumar** (2017) on emotional maturity of graduate students found no significant difference in the emotional maturity of graduate students with respect to locality of college, which was similar to the findings of the present research. **Buvanambal and Ranjithamani** (2017) conducted a comparative study on emotional maturity of secondary school students recorded no significant difference between secondary school students in their emotional maturity with respect to location of school and type of school, which reflected the findings of the present study. **Yashoda & Kalyani Devi** (2017) studied the influence of emotional maturity of adolescents and reported that there was significant difference between male and female adolescent students in their emotional maturity. **Suvankar Biswas** (2018) conducted a study on emotional maturity of students of higher secondary schools reported that there was no significant difference in the emotional maturity of higher secondary students from rural and urban schools, which was similar to the findings of the present research. **Smritikana Ghosh** (2019) examined the emotional maturity among adolescents and found that there was significant difference between male and female adolescents in their emotional maturity, which was in accordance with the findings of the present research. On the contrary, the study conducted by **Ritu Singh et al.** (2013) on social maturity and emotional maturity of senior school adolescents reported no gender based differences in their emotional maturity. Similarly, the study conducted by **Rinku Mathews** (2014) reported no significant difference between male and female school teachers in emotional maturity which stood on the other side of the present research. **Jasbir Kaur & Babita Arora** (2014) conducted a study on coping styles among teacher trainees in relation to emotional maturity and the results clearly indicated that there was no significant difference between male and female teacher trainees in their emotional maturity. **Jasbir Kaur & Babita Arora** (2014) conducted a study on coping styles among teacher trainees in relation to emotional maturity and the findings clearly indicated no significant difference between male and female teacher trainees in their emotional maturity. **Rinku Mathews** (2014) made an investigation on emotional maturity and reported no significant difference between male and female school teachers in their emotional instability and emotional regression, which were the dimensions of emotional maturity. **Yogesh A Jogsan** (2014) made an investigation on self-actualization and emotional maturity of youth males and females and reported no significant difference in their emotional maturity. The study conducted by **Sunil Kumar** (2014) on emotional maturity of adolescent students reported no significant difference with respect to gender in their emotional maturity. Similarly, **Sairabanu Daragad et al.** (2016) made an assessment of selected dimensions of emotional maturity among school boys and girls and the study concluded that there was no significant difference between school boys and girls in their emotional maturity. In the same manner, the findings of the study conducted by **Rafeedali** (2016) on emotional maturity among the

heads of secondary schools reported that there was no significant difference in their emotional maturity among high school heads with regard to gender. **Sairabanu Daragad et al.** (2016) made an assessment of selected dimensions of emotional maturity among school children and concluded that there was no significant difference between boys and girls with regard to the dimensions of emotional maturity namely, ability to deal, adapt to change, relate to others, capacity to sublimate and capacity to love. **Vinitha & Lal Kumar** (2017) conducted a study on emotional maturity of graduate students and the findings reported no significant difference in the emotional maturity among graduate students with respect to their gender, which was not in accordance with the present research. **Buvanambal & Ranjithamani** (2017) conducted a comparative study on emotional maturity of secondary school students reported no significant difference in the emotional maturity between secondary school boys and girls in their emotional maturity. Similarly, **Suvankar Biswas** (2018) conducted a study on emotional maturity of students of higher secondary schools reported that there was no significant difference in the emotional maturity of higher secondary school boys and girls. Also there was no significant difference in the emotional maturity of higher secondary school students from rural and urban schools which stood on the other side of the present research. Likewise, the study conducted by **Suvankar Biswas** (2018) on emotional maturity of students of higher secondary schools reported no significant difference in their emotional maturity with respect to their gender, which fell on the other side of the present research. Similarly, the study conducted by **Bharat Kumar** (2018) among school students reported a significant difference between students of rural and urban schools in their emotional maturity. **Samhitha et al.** (2019) studied emotional maturity among tribal adolescents pinpointed that there was no significant difference between male and female adolescents in their emotional maturity. **Srinivasan & Pugalenthi** (2019) studied the relationship between emotional maturity and teaching competency of prospective teachers. The findings revealed that there was no significant difference between male and female teachers in their emotional maturity. **Sheela & Rajendran** (2020) analysed the relationship between internet addiction and emotional maturity among higher secondary students and found that there was no significant difference between higher secondary boys and girls in their emotional maturity, which did not support the findings of the present research. The results of the correlation analysis (γ) observed a significant positive relationship between teaching competency and emotional maturity of student teachers. The reason for the significant positive relationship between teaching competency and emotional maturity among student teachers was that the functional and dynamic components that are present in emotional maturity help the student teachers to acquire essential skills and competencies that are essential for their profession and thereby making them very successful in their academic achievements and performance. It was also understood from the results of the present study that the student teachers who had developed more emotional maturity imbibed clear idea about their abilities and potentials. The student teachers with more emotional maturity naturally cultivated essential skills and competencies in them as well. The emotionally mature student teachers have the control over their emotions in accordance with their needs and requirements. Hence it was confirmed that high achievers were with high level of emotional maturity in them which ensured the ultimate benefit of having high level teaching competency as it is a well known fact that emotional maturity helps the student teachers to cultivate essential teaching competencies abundantly.

VI. RECOMMENDATIONS AND IMPLICATIONS

Based on the findings, the following recommendations are given,

1. Awareness programmes, seminars and debates on emotional instability, emotional regression, Faulty and social adjustment, lack of independency and flexibility and adoptability may be conducted for the student teachers to enable them understand the importance of emotional maturity.
2. Ample opportunities may be created for the student teachers to help them participate in various social activities. Outreach programmes like NCC, Scouts and Guides etc., may be conducted to develop social virtues among student teachers.
3. The sense of independence should be cultivated in the student teachers through counselling and guidance to bring fearlessness to their personality in order to develop emotional maturity and essential teaching competency.
4. Special classes in music and dance may be organized for B.Ed. trainees by the administrators of teacher education institutions. This will help them to be effective and creative in language teaching and also help organizing those co-curricular activities for their students. This will pave the way for effective teaching competency.

VII. CONCLUSION

Teachers are said to be the architects of the future generations. They can act as role models in the lives of learners and guide them in the process of education for development. A sound teacher performance embellished

with effective teaching competencies culminating into quality learning among students in cognitive, affective and psychomotor areas. Similarly, teachers also acquire essential professional competencies and commitments to perform their teaching blended with necessary emotional maturity. At a professional level, competencies in teaching require performance skills and theoretical backgrounds. The process of teaching-learning, being a process of interaction and interpretation becomes meaningful and successful only in the meticulous application of required competencies. Likewise, a teacher with ample emotional maturity could assist a student developing his/her creative side. It is profusely realized that the study of 'emotional life' among teachers is now emerging as a descriptive science, comparable with anatomy. The findings of the present study revealed that there was significant positive relationship between teaching competency and emotional maturity of student teachers. This reinforces the fact that teacher educators who impart information and knowledge must have a well-balanced emotional maturity in them to deal with the ripened student teachers who need to cultivate identifiable attitudes and reasonable emotional maturity in them. The present study would help the student teachers to realize the importance of teaching competency and emotional maturity in improving professional effectiveness and emotional strength in them. Therefore, it is of prime need to enrich teaching competency and strengthen emotional maturity in prospective teachers, who during their pre-service programme and after becoming teachers could confidently ensure the effectiveness of teaching and efficiently raise the quality of education and in turn improved standards of learners enormously.

VIII. REFERENCE

- [1] Arti Talwar & Mandeep Kaur (2014). Teaching Competency of Secondary School Teachers in relation to Emotional Intelligence. *International Journal of Learning, Teaching and Educational Research* Vol. 3, No.1, pp. 83-90.
- [2] Ashok Kumar, C. & Rajendran, K. K., (2016). Job Satisfaction among Higher Secondary Teachers. *Scholarly Research Journal for Interdisciplinary Studies*, Volume: 4; Issue: 26; PP-2803-2813.
- [3] Ashok Kumar, C. & Rajendran, K. K., (2017). Social cognition and professional competencies among B.T assistant teachers, *International Journal of Informative and Futuristic Research*, Volume: 4; Issue: 5; PP-6111-6124.
- [4] Ashok Kumar, C. & Rajendran, K. K., (2017). Social cognition and professional competencies among B.T assistant teachers, *International Journal of Informative and Futuristic Research*, Volume: 4; Issue: 5; PP-6111-6124.
- [5] Ashok Kumar, C. & Rajendran, K. K., (2018). Attitude of Teachers of Secondary Education towards Teaching in relation to their Professional Competencies. *International Journal of Creative Research Thoughts*, Volume 6, Issue 2, PP-893-903.
- [6] Beula Johns & Annaraja (2008). Study on communication skill levels in Turkish. Retrieved from Shodhganga Inflibnet.com.
- [7] Bharat Kumar (2018). Study of Difference of Emotional Maturity among Adolescents of Dehradun. *The International Journal of Indian Psychology*, 6(3).
- [8] Binualal K.R. (2015). Emotional Intelligence of Students Teachers in relation to their Social Skills and Teaching Competency, *Edutracks*, Vol.14-No.6 ISSN: 0972-9844.
- [9] Buvanambal & Ranjithamani (2017). A Comparative Study on Emotional Maturity of Secondary School Students in Tirupur District. *International Journal of Interdisciplinary Research in Arts and Humanities*. 02(02), 35-39.
- [10] Dorothy Rani, V.L. & Annaraja, P. (2000). Standards of science teaching in primary schools (Unplished M.Phil. Dissertation). Manonmaniam Sundaranar University, Tirunelveli, Tamil Nadu.
- [11] Fabila Josephin, J. S. & Alphonse Raj, M. (2008). Relationship between information and communication technology skills and the teaching competency of B.Ed. students (Unpublished M.Phil. dissertation). Manonmaniam Sundaranar University, Tirunelveli, Tamil Nadu.
- [12] Himabindu, G. (2012). Teacher Efficacy in Relation to Teaching Competency. *International journal of multidisciplinary educational research*, 1 (4).
- [13] Jagannadh, Y.V (2012). Teaching competency of B.Ed. Female Teacher Trainees, an International Indexed, Refereed & Peer Reviewed Bi-Annual Journal in Education, Vol. III (II).
- [14] Jasbir Kaur & Babita Arora (2014). Inclusive Education – An Integrated Approach, *International Journal of Research in Humanities, Arts and Literature (IMPACT: IJRHAL)*, Vol. 2, No. 1, pp. 59-64.
- [15] Jose Augustine (2010). Teaching aptitude, competency, academic background and achievement in educational psychology, *Edutracks*, 09 (06), 26-27.
- [16] Juli Eben, A. & Sebastian, S. (2007). Teaching competency of the teachers in the schools for the mentally challenged. *Research and Reflections on Education*, 05(03), 21-25.
- [17] Kala Vincila (2009). The Teaching Competency of D.T.Ed. students. Retrieved from Shodhganga Inflibnet.com.

- [18] Kanakala Jayaram (2010). The Impact of Professional Competency and creativity on Professional Pleasure among Secondary School Teacher, Retrieved from Shodhganga Inflibnet.com.
- [19] Mani, S. & Mohan, S. (2005). A study to correlate the teaching competency of teacher trainees in colleges of education (Unpublished Doctoral Dissertation). Alagappa University, Karaikudi, Tamil Nadu.
- [20] Menaka (2016). Teacher Effectiveness of Secondary School Teachers in Relations to Their Emotional Maturity. *International Journal of Engineering Technology and Management (IJETM)*, Vol. 3, No. 6, pp. 05-09.
- [21] Mohammed Ahmad Khan & Jarrar Ahmad (2017). Teaching Competency of Secondary School Teachers in relation to their Teaching Aptitude, Emotional Intelligence and Adjustment. *International Journal of Applied Research*, 2(2): 68-72.
- [22] Naree Aware Achwarin R, N (2009). Teaching Competence of Teachers at Schools in Three Southern Province of Thailand. www.journal.an.ednscholar/2009/word
- [23] Nur Mustafa, M. (2013). Professional Competency Differences among High School Teachers in Indonesia, *International Education Studies*; Vol. 6, No. 9; Published by Canadian Center of Science and Education.
- [24] Rafeedali (2016). A Study on Emotional Maturity among the Heads of Secondary Schools in Kerala. *International Education & Research Journal (IERJ)*. 02(11), 61-64.
- [25] Ramesh & Annaraja, P. (2010). A comparative study on teaching competency of male and female B.Ed. students in distance education. *Journal of Educational Research and Extension*, 47(03), 79-86.
- [26] Ranjini & Mohanasundaram (2012). Teachers' Competencies and Academic Achievement of Secondary Teacher Trainees. *Indian Educational Abstracts*. 8 (1): 11-14.
- [27] Rinku Mathews (2014). Emotional Maturity and Insecurity among School Teachers. *The International Journal of Indian Psychology*. 02(02), 01-29.
- [28] Sahayarani et al. (2011). A Study on Attitude Towards Teaching Profession and Achievement in Teaching Competency of B.Ed Trainees. *New Frontiers in Education*, Vol. 44, No. 3, pp. 250- 253.
- [29] Sairabanu Daragad, Roopa & Surendra (2016). Assessment of Selected Dimensions of Emotional Maturity among School Children. *International Journal of Research in Social Sciences*. 06(12), 525-533.
- [30] Sunil Kumar (2014). Emotional Maturity of Adolescent Students in Relation to Their Family Relationship. *International Research Journal of Social Sciences*. 03(03), 06-08.
- [31] Samhitha et al. (2019). A study on emotional maturity among the tribal adolescents in Adilabad district of Telangana. *The Pharma Innovation Journal* 8(6), 657-660
- [32] Sarvjeet Kaur Brar (2017). Altruistic Behavior among Adolescents in Relation to Their Emotional Maturity. *International Journal of Educational Science and Research*. 07(05), 29-36.
- [33] Shafiq & Rubeena Khan (2016). Emotional Maturity among Adolescents: A Comparative Study of Nuclear and Joint Families. *Research Paedia*. 03(02), 19-26.
- [34] Sheeja.V & Annaraja.P. (2011). Teaching Competency of Secondary Teacher Education Students in relation to their Metacognition. *International Journal on New Trends in Education and Their Implications*, Vol. 2, No. 3.
- [35] Sheela & Rajendran (2020). Internet Addiction and Emotional Maturity among Higher Secondary Students. *Purakala Journal*. 31(23). 404-415
- [36] Shukla (2010). Effect of Simulated Practice Teaching on Teaching Competency of Student Teachers. *International Referred Research journal*, Sept, 2010, Vol. III (P.37-38).
- [37] Singaravelu, G. (2008). Teaching competency of D.T.Ed. in internship priogramme, *Journal of Educational Research and Extension*, 45(03).
- [38] Sivakumar & Edward William Benjamin, (2016). Interrelationship among Teaching Competency and Professional Development of Teacher Educators in B.Ed. Colleges, *International Education and Research Journal*, Vol. 2(1).
- [39] Sivasankar, S. (2013). Relationship between Social Intelligence and Teaching Competency of Higher Secondary School Teachers. *Shanlax International Journal of Education*, Vol.2, No.2.
- [40] Smriti Kiran Saimons, Atindra Nath Dutta & Suvendu Dey (2016). Effect of Emotional Maturity on Self- Concept of Adolescents – A Study. *International Journal of Advance Research*. 04(12), 2215-2222.
- [41] Smritikana Ghosh (2019). Emotional maturity among adolescents. *The International Journal of Indian Psychology*, Vol. 07, No. 4, pp. 570-573.
- [42] Somraj and Ajmer Singh Malik (2017). Professional competence and performance of teachers in higher education. Retrieved from Shodhganga Inflibnet.com.
- [43] Soniya, S. (2013). Relationship between communicative behaviour and teaching competency of high school teachers. Retrieved from Shodhganga Inflibnet.com.
- [44] Srinivasan & Pugalenthi (2019). A Study on Relationship between Emotional Maturity and Teaching Competency of Prospective Teachers. *Shanlax International Journal of Education*, Vol. 7, No. 4, pp. 42- 45.
- [45] Sunil Kumar (2014). Emotional Maturity of Adolescent Students in Relation to Their Family Relationship. *International Research Journal of Social Sciences*. 03(03), 06-08.

- [46] Surajit Mahanta (2012). Professional Competence VIS-A-VIS Variations of Gender and Locality, International Journal of Scientific and Research Publications, Volume 2, Issue 12.
- [47] Surya Vasan (2014). Teaching Competence and Teaching Style of primary School Teachers, Review of Arts and Humanities, Vol. 3, No. 1, pp. 121- 126.
- [48] Suvankar Biswas (2018). A Study on Emotional Maturity of Students of Higher Secondary School. The International Journal of Innovative Research in Engineering & Multidisciplinary Physical Sciences. 06(04), 704-708.
- [49] Thamilmani, P. & Thangasamy, S. (2006). A study on teaching competency, teacher personality and teacher attitude on student achievement in science in higher secondary schools (Unpublished Doctoral Dissertation). Madurai Kamaraj University, Madurai, Tamil Nadu.
- [50] Vel Murugan, P. & Rajendran, K.K. (2014). Influence of multiple intelligence and creativity on teaching competency of B.Ed. trainees, (Unpublished Doctoral Dissertation). Bharathidasan University, Tiruchirappalli, Tamil Nadu.
- [51] Vinitha & Lal Kumar (2017). A study of emotional maturity of graduate students in Vellore district. International Journal of Applied Research. 03(03), 757-760.
- [52] Yashoda & Kalyani Devi (2017). Influence of Parental Employment, Grade and Gender on Emotional Maturity of Adolescents. International Journal of Environment, Ecology, Family and Urban Studies (IJEEFUS). 07(04), 01-06.
- [53] Yogesh A. Jogsan (2014). Self-Actualization and Emotional Maturity in Youth Male and Female. Asian Resonance, 03(01), 129-132.
- [54] Yolila Sangtam & Talawar (2014). A Study of Academic Achievement, Study Involvement and Emotional Maturity of Secondary School Tribal Students of Nagaland. (Unpublished Ph.D. dissertation). Bangalore University, Jnanabharathi, Karnadaga.