



TEACHING COMPETENCY OF MATHEMATICS TEACHER AT SECONDARY LEVEL W.R.T. GENDER, LOCALITY AND TYPE OF INSTITUTE

S. Mary Mounika, Research Scholar, Department of Education, Sri Padmavathi Mahila Viswavidhyalayam, Tirupathi, A.P. India

Dr.Ch.Baby Prasuna, Research Supervisor & Assistant Professor, Department of Education, Sri Padmavathi Mahila Viswavidhyalayam, Tirupathi, A.P. India

Abstract:

The present study aims the teaching competency of Mathematics teacher at secondary level w.r.t. gender, Locality and Type of institute. The present study was conducted on a sample of 20 regular and private in-service Mathematics teachers from Government and Private high schools of Guntur district of Andhra Pradesh. The study used a self-developed Tool. Descriptive and inferential statistics were used to draw inferences on the hypotheses. The findings of the study revealed no significant relationship between male and female maths teacher teaching competence and locale has no significant effect on teaching competence but Type of institute has significant effect on teaching competence.

Key Words: Teacher, Teaching Competency, Gender, Type of institute and locale

INTRODUCTION:

Teaching competence is related to the proficiency of teaching and therefore to the duties of the teacher in the classroom. Teachers' competences involve the diverse roles of teachers at different levels of personal, school, local community, and professional networks, covering the entire spectrum of their profession (Hagger & McIntyre, 2006).

Teaching competencies include skills like communication and interpersonal skills, under which come competencies like acting as a role model to their students, having clear verbal communication skills, and assuming responsibility, etc. Next, under teaching competencies, comes organisation and planning, classroom management, facilitation and engagement, and assessment and coaching.

NEED OF THE STUDY:

As the quality in education depends much on the competence of the teacher because the teacher is considered to be the hub of the teaching-learning process. In this context, schools and teachers have additional responsibilities in shaping student behaviour. Teaching competencies are critical for the 'well-development' of students and the provision of high-quality education, particularly for students at vocational institutions. Teaching competencies will benefit students' academic development and skills while also assisting teachers in improving their teaching methods. Teaching competencies also include skills such as organising the classroom environment so that students can learn in a healthy system. It also includes planning effective lesson plans and implementing them on time.

Review of Related literature:

Vimal Vidushy (2021) reported that Teaching Competence among Secondary School Teachers in relation to Teaching Aptitude, Locale and Teaching Experience. the study revealed a significant relationship between teaching competence and teaching aptitude among secondary school teachers and locale has no significant effect on teaching competence but



teaching experience has significant effect on teaching competence.

Pham Sy Nam (2023) studied that Mathematics Teachers' Professional Competence Component Model and Practices in Teaching the Linear Functional Concept—An Experimental Study The findings outline four criteria that serve as the cornerstone of our concept of professional competences for Mathematics teachers: I. Mathematical Knowledge; II. Interpretation of the Official Mathematics Curriculum's Intentions; III. Understanding of Students' Thoughts; and IV. Design of Teaching. This model was applied in materials design for the workshop and was highly appreciated and got a high level of satisfaction from participants.

STATEMENT OF THE PROBLEM:

Supporting growth in problem solving is key to capacity development for both teachers and students. When teachers engage in rich academic conversations that inquire deeply into content and pedagogy, they have an opportunity to cultivate student capacity to engage in rich academic discourse, problem solving and mathematical learning. In this study, we examined an intensive professional development training intervention in which teacher participants learned to use and understand the Teaching Learning Community (TLC) approach, design and connect standards-based lessons, and nurture a mindset of learning and thinking like a problem solver among students and teachers alike.

OPERATIONAL DEFINITIONS OF KEY TERMS:

Teaching Competency : A teaching competency is a set of professional skills that enables practical teaching situations to be appropriately resolved. Teachers Pro is designed so teachers can learn taking their needs and concerns into consideration.

Mathematics Teachers : A teacher who teach Mathematics at secondary level students

OBJECTIVES:

1. To find out the teaching competency of mathematics teacher at secondary level.
2. To find out the teaching competency of mathematics teacher w.r.t. the following variables
 - a. Gender : Male / female
 - b. Locality of School : Rural / Urban
 - c. Type of Institute : Government / Private

HYPOTHESES:

1. There would be no significant difference between male and female secondary school Mathematics teachers in their teaching competency. .
2. There would be no significant difference between rural and urban secondary school Mathematics teachers in their teaching competency.
3. There would be no significant difference between Government and private secondary school Mathematics teachers in their teaching competency.

SCOPE AND DELIMITATIONS:

The scope of the demographic variables is Gender, Locality, Type of Institute,

- The study is limited to the 20 secondary school Mathematics teachers in Guntur district only.

**METHODOLOGY:**

Survey method is used in this study. A simple random sample of 20 secondary school teachers in Guntur district. A researcher construct and standardized the Teaching competency of mathematics teacher. A tool consists of 40 items. the scoring procedure is likert 3 point scale Agree (3 marks) , Disagree (2 marks) and Undecided (1 mark). Spilt half reliability is 0.82 and Test-retest reliability is 0.79 and the tool is valid. mean SD ; 't' value were calculated.

ANALYSIS AND INTERPRETATION:

Objective -1: To find out the teaching competency of mathematics teacher at secondary level.

Table-1 :Table showing mean, % of mean, S.D of the Mathematics Teachers

Whole	Mean	SD	% of mean	1/5 th of Mean
20	46.44	10.04	77.40	9.288

From the table .1 that the Mean and Standard Deviation of teachers are 46.44 and 10.04 respectively which can be considered as a good scores in general. The percentage of mean is 77.40

Objective – 2: To find out the teaching competency of mathematics teacher w.r.t.the following variables

- Gender : Male / female
- Locality of School : Rural / Urban
- Type of Institute : Government / Private

Hypothesis-1: There would be no significant difference between male and female secondary school Mathematics teachers in their teaching competency.

Table – 2

showing mean, S.D. and 't' values of male and female teachers

Gender	No	Mean	% of mean	SD	S.Ed	't'
Male	10	45.11	75.18	9.24	0.71	1.28 ^{NS}
Female	100	46.02	76.7	9.46		

NS- Not significant at 0.05 level

From the table 3. that the Mean and Standard Deviation of males are 45.11 and 9.24 respectively. Similarly, Mean and Standard Deviation of females are 46.02 and 9.46 respectively. The calculated t-value 1.28 is not significant at 0.05 level. Hence, the null hypothesis is accepted and it is concluded that there is no significant difference between the male and female secondary school Mathematics teachers in their teaching competency.

Hypothesis – 2: There would be no significant difference between rural and Urban secondary school Mathematics teachers in their teaching competency.

Table – 3 :showing mean, S.D. and 't' values of rural and urban teachers

Locality	No	Mean	% of mean	SD	S.Ed	't'
Rural	100	46.72	77.86	9.01	0.62	1.70 ^{NS}
Urban	100	45.08	75.13	9.27		

NS- Not significant at 0.05 level From the table



4 that the Mean and Standard Deviation of rural teachers are 76.72 and 9.24 respectively. Similarly, Mean and Standard Deviation of urban teachers are 75.08 and 9.46 respectively. The calculated t-value 1.70 is not significant at 0.05 level. Hence, the null hypothesis is accepted and it is concluded that there is no significant difference between the rural and urban secondary school Mathematics teachers in their teaching competency..

Hypothesis-3: There would be no significant difference between Government and Private secondary school Mathematics teachers in their teaching competency.

Table – 4

showing mean, S.D. and ‘t’ values of Government and Private schoolteachers

Type of institute	No	Mean	% of mean	SD	S.Ed	‘t’
Govt	100	46.12	76.86	9.08	0.61	3.016**
Private	100	44.28	73.80	9.13		

**** significant at 0.01 and 0.05 levels**

From the table 5 that the Mean and Standard Deviation of government teachers are 46.12 and 9.08 respectively. Similarly, Mean and Standard Deviation of private teachers are 44.28 and 9.13 respectively. The calculated t-value 3.016 is significant at 0.01 level. Hence, the null hypothesis is rejected and it is concluded that there is significant difference between the Government and Private secondary school Mathematics teachers in their teaching competency..

FINDINGS:

1. 77.48% of secondary school teachers have a high level of teaching competency of mathematics teacher.
2. The variable gender is not significantly influenced the teaching competency of secondary school Mathematics teachers.
3. The variable locality is not significantly influenced the teaching competency of secondary school Mathematics teachers.
4. The variable type of institute was significantly influenced the teaching competency of secondary school Mathematics teachers.

EDUCATIONAL IMPLICATIONS:

These findings are expected to bring benefits for stakeholders who are Mathematics teachers in schools or involved in Mathematics teacher education in higher education.

SUGGESTIONS FOR FURTHER STUDY:

1. A study can be taken up in the relationship of teaching Attitude and teaching attitude of higher secondary school teachers.
2. A similar study can be taken up for the higher education level.

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