

# Teaching Competencies of Upper Primary Teachers in Framing FA (a) Activities of CCE

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## Abstract

The aim of the study was to find out the difference between teaching competencies of upper primary teachers in framing FA (a) activities of CCE in terms of gender, locality, marital status, residence, age, the medium of instruction, type of school, nature of school and experience. The investigator adopted a survey method on analyzing teaching competencies of 900 upper primary teachers selected Theni district using a random sampling technique. Teaching competency five-point rating scale consisted of 25 statements with 5 point scale developed by the researcher based on the assessment competencies (Prior instructions to activities, instructions during activities, and instructional treatment after the activities) was used to collect data. Mean, SD, 't' test, and 'F' test were used as statistical techniques for data analysis. The findings of the study revealed that there was no significant difference between the teaching competency of upper primary teachers' in framing FA (a) activities of CCE in terms of gender, locality, marital status, residence, age, and medium of instruction. Still, they differed significantly in terms of the type of school, nature of the school, and experience.

**Keywords:** Teaching competencies, Upper primary teachers, FA (a) activities and CCE

## Introduction

The main purposes of evaluation are to help the learners improving their achievement in scholastic areas and to develop life skills and attitudes concerning the larger context and canvas of life. In keeping with the above view, reforms in the examination system are often recommended, sometimes discussed, and rarely implemented. Introduction of Continuous and Comprehensive Evaluation (CCE) is one of such reforms which have undergone a long journey. FA (a) is a measure of the learner's active participation in a spectrum of learning activities. It can be conducted during learning in each unit. This may also include group evaluation wherever appropriate. It is based on the teacher's observation/student's participation/presentation / creative expression and other techniques.

Teachers' competence means the right way of conveying units of knowledge, application, and skills to the students. It is a set of observable teachers' behaviors that bring about pupils' learning. The teaching-learning activities are competency-based and not content or textbook-based. The content is used to assist in selecting and organizing suitable activities. The competency of teachers due to contextual variations can significantly affect their accomplishment. So the present study was conducted to find out the teachers' competency in framing FA (a) activities of CCE.

## Need and Significance of the Study

Competency-based teaching becomes meaningful, purposive, and pin-pointed and also helped in resolving some of the problems by identifying the irrelevant and excessive learning load in the existing curriculum. The teachers are not adequately prepared for the effective execution of CCE in schools. The competencies of upper primary school teachers influence the quality of teaching-learning abundantly, and hence sharpening and refining the competencies of upper primary school teachers is very imperative. Hence the need to find the teaching competencies of upper primary Mathematics teachers using the CCE system in order to enhance students' achievement is essential.

## Delimitation of the Study

- The study has been delimited to 900 upper primary mathematics teachers from government, government-aided, and matriculation schools in the Theni district.
- A self-developed rating scale was used to find out the teaching competency of upper primary teachers in framing FA (a) activities of CCE.

## Variables

### Dependent Variables

Teaching competencies of upper primary teachers.

### Independent Variables

Gender (Male/Female), Location of school (Rural/Urban), Marital Status (Married/Unmarried), Residence (Village/Town), Age (below 35 years/above 35 years), Medium of instruction (Tamil/English), Type of school (Government/Government Aided/Matriculation school), Nature of school (Boys/Girls/Co-education), Teaching experience (Below five years/5-10 years/Above 10 years) were selected as independent variables for the study.

## Objectives

1. To find out whether there is any significant difference between the teaching competencies of upper primary teachers in framing FA (a) activities of CCE in terms of gender, locality, marital status, residence, age, and medium of instruction.

2. To find out whether there is any significant variance in the teaching competencies among upper primary teachers' in framing FA (a) activities of CCE in terms of the type of school, nature of school and experience.

## Hypothesis

- There will be no significant difference between the teaching competencies of upper primary mathematics teachers in framing FA (a) activities of CCE in terms of gender, locality, marital status, residence, age, the medium of instruction.
- There will be no significant variance in the teaching competencies among upper primary mathematics teachers in framing FA (a) activities of CCE in terms of the type of school, nature of school and experience.

## Method

The researcher adopted a survey method on analyzing teaching competencies of 900 upper primary mathematics teachers in framing FA (a) activities of CCE.

## Sample

A Sample consisted of 900 upper primary mathematics teachers in the Theni district who were selected using a random sampling technique. Data were collected from 300 government, 300 government-aided, and 300 matriculation teachers.

## Tool

Teaching competency 5 point rating scale (1. Totally agree, 2. Agree, 3. Partially agree, 4. Disagree and 5. Totally disagree) consisted of 25 statements that were developed by the researcher to find out the teaching competencies of upper primary mathematics teachers in framing FA (a) activities. Positive items in the scale were assigned scores of 5, 4, 3, 2 and 1, respectively. On the other hand, the negative items were scored in reverse order completely. It was based on the assessment competencies (Prior instructions to activities, Instructions during activities, and instructional treatment after the activities).

### Pilot Study

A pilot study was conducted by administering the tool with 35 statements to a sample of 100 upper primary mathematics teachers from government, government-aided, and matriculation schools in the Theni district of Tamil Nadu. Scoring was done as per the key and arranged into two sets of scores (27% high scores and 27% low scores).

### Item Analysis

After the content analysis, with the guidance of a team of experts, the tool was subjected to item analysis.

### Item Difficulty

The difficulty level of an item was determined by the number of students in the group who got the item right.

$$\text{Difficulty Level} = \frac{RH+RL}{NH+NL}$$

Where, RH = the number of students in the higher group who responded correctly, RL = the number of students in the lower group who responded correctly, NH = Number of students in the higher group, NL = Number of students in the lower group. In general, items should have values of difficulty, not less than 20% correct and not greater than 80%.

### Discrimination Index

The discrimination index was calculated using the formula  $\frac{RH - RL}{NH \text{ (or) } NL}$ . The item with a value of above 0.2 was selected, and the item with the value below 0.2 was deleted. Ten items were deleted. The final tool consisted of 25 items that were used for the study.

### Establishing Validity and Reliability

**Validity:** Test and retest method was used to find out the validity. Pearson product-moment correlation was computed between the two sets of test scores. It was found to be 0.691.

**Reliability:** Split-half method was used to find out the reliability. Pearson product-moment correlation was computed between the two sets of scores as 0.709. This value was applied in the Spearman Brown formula given below.

$$R = 2r / 1+r$$

The reliability coefficient of the full test 'R' 0.829 was computed as significant at 0.01 level indicated that the tool possessed high reliability.

**Statistical Techniques:** Mean, SD, 't' test, and the Pearson product-moment correlation coefficient were the techniques used to analyze the data.

### Testing of Hypothesis

#### Hypothesis: 1

There will be no significant difference between the teaching competencies of upper primary mathematics teachers in framing FA (a) activities of CCE in terms of gender, locality, marital status, residence, age, medium of instruction.

**Table 1: Teaching Competencies of Upper Primary Teachers in CCE about Formative Assessment FA (a) in terms of Gender, Locality, Marital Status, Residence, Age and Medium**

Variables	FA (a)	N	Mean	SD	't' test
Gender	Male	336	53.44	10.55	0.87
	Female	564	54.07	10.25	
Locality	Rural	562	53.71	10.47	0.48
	Urban	338	54.05	10.19	
Marital status	Married	839	53.82	10.34	0.12
	Unmarried	61	54.00	10.66	
Residence	Village	787	53.91	10.33	0.58
	Town	113	53.29	10.02	
Age	Below 40	478	54.02	10.44	0.58
	Above 40	422	53.62	10.28	
Medium of instruction	Tamil	640	53.77	10.43	0.27
	English	260	53.98	10.19	

Table value (1.96) at .05 level of significance

The above table shows that the calculated 't' values (0.87, 0.48, 0.12, 0.58, 0.58, 0.27) are lesser than the table value (1.96) at .05 level. So the null hypothesis is accepted and concluded that there is no significant difference between the teaching competencies of upper primary teachers in framing FA (a) activities of CCE about gender, locality, marital status, residence, age, and medium of instruction.

## Hypothesis: 2

There will be no significant variance in the teaching competencies among upper primary

mathematics teachers in framing FA (a) activities of CCE in terms of the type of school, nature of the school, and experience.

**Table 2: Teaching Competencies of Upper Primary Teachers in CCE about Formative Assessment FA (a) in terms of the type of School, Nature of the School and Experience**

Variables	Sources of Variation	Sum of Square	Mean square	'F'	Remarks
Type of School	Between-group	18.128	9.064	0.084	S
	Within the group	96568.832	107.658		
Nature of School	Between-group	91.319	91.319	0.850	S
	Within the group	96495.641	107.456		
Experience	Between-group	371.798	92.949	0.865	S
	Within the group	96215.162	107.503		

Table value (1.96) at .05 level of significance

The above table shows that the calculated 'F' values (0.84, 0.850, and 0.865) are greater than the table value at .05 level. So the null hypothesis is rejected and concluded that there is a significant difference between the teaching competencies of upper primary teachers in framing FA (a) activities of CCE about the type of school, nature of the school, and experience.

## Findings

- There was no significant difference between the teaching competency of upper primary mathematics teachers in framing FA (a) activities of CCE about gender, locality, marital status, residence, age, and medium of instruction.
- There was a significant difference between the teaching competency of upper primary mathematics teachers in framing FA (a) activities of CCE about the type of school, nature of school and experience.

## Conclusion

Teachers occupy the leading role in strengthening the education system. Efficient and professionally dedicated teachers only can mold the future generation who design the future of society. The findings of the study revealed that the teaching competency of upper primary mathematics teachers in framing FA (a) activities of CCE differed significantly in the type of school, nature of the school, and experience. Teaching competencies are very much essential for teachers to discharge their duties effectively. It is recommended that a suitable training program should be arranged

to develop teaching competencies of upper primary mathematics teachers in framing FA (a) activities of CCE. Teachers should follow appropriate principles for developing suitable formative assessment (A) activities in CCE according to the learning pace of the student.

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