

Assessing The Development of Teaching Competencies in Pre-Service Teacher Education: A Longitudinal Study

PROF. DR. DEVANANDAN K. V.

Principal, KPPM College of Teacher Education, Malappuram

Abstract- *This long-term study assesses how well 485 student teachers participating in a teacher education program in Kerala have developed their core teaching competencies. To evaluate progress in five crucial teaching domains—planning, presentation, closing, evaluation, and classroom management—competences were measured at two stages: entry-level and exit-level. The General Teaching Competency Scale (GTCS), created by B.K. Passi and M.S. Lalitha, was used to gather data. The impact of gender and location was investigated using statistical analyses, such as ANOVA and t-tests. Regardless of gender or location, the results show notable gains in all teaching competencies from entry to exit levels, with female students demonstrating superior presentation abilities at the entry level. The study highlights the need for ongoing advancements in curriculum design, practice teaching, and soft skills training while confirming the efficacy of teacher education programs in improving teaching competencies.*

Indexed Terms- *Teacher Education, Teaching Competencies, Longitudinal Study, Gender, Locality, Professional Development*

I. INTRODUCTION

Teaching effectiveness and student outcomes are shaped by professional competence, which is crucial for high-quality education. Personal characteristics, abilities, and regular behaviours that improve job performance are all part of competence (Singh, 2002). Classroom management, student psychology, and pedagogical mastery are all included in teaching (Snyder & Drumon, 1998). Good teachers create inclusive, critical-thinking environments while adjusting to a variety of needs. Studies on competency development are still scarce, despite the

increased emphasis on teacher quality (Koster et al., 2005; Freeman, 2007). By evaluating the ways in which teacher education programs assist student teachers in acquiring fundamental teaching skills, this study fills that knowledge gap.

II. NEED AND SIGNIFICANCE OF THE STUDY

Planning, instruction, assessment, classroom management, and reflection are among the fundamental teaching competencies that teacher education programs seek to instill in student teachers (Koster et al., 2005). However, because many student teachers duplicate conventional techniques rather than utilising creative approaches, there is frequently a disconnect between theory and practice (Chambers, 1991). This emphasises how important it is to match teacher preparation to changing educational standards. To guarantee that knowledge is applied practically, the National Council for Teacher Education (NCTE, 2006) advocates competency-based, outcome-oriented training. Additionally, Freeman (2007) highlights how crucial flexibility, teamwork, and introspection are to good instruction. This study assesses how well Kerala's teacher education programs foster these fundamental skills, providing information for institutional planning and curriculum development.

OBJECTIVES

- To assess entry-level and exit-level teaching competencies among student teachers.
- To examine the influence of gender and locality on teaching competency development.

HYPOTHESES:

1. No significant gender-based difference in entry-level teaching competencies.

2. No significant locality-based difference in entry-level teaching competencies.
3. No significant gender-based difference in exit-level teaching competencies.
4. No significant locality-based difference in exit-level teaching competencies.
5. No significant difference between entry and exit-level competencies of male students.
6. No significant difference between entry and exit-level competencies of female students.
7. No significant difference between entry and exit-level competencies of rural students.
8. No significant difference between entry and exit-level competencies of urban students.

III. METHODOLOGY

This study adopted a descriptive longitudinal research design to examine the development of teaching competencies among pre-service teachers over time. Data were collected at two points—entry and exit of the practice teaching phase—to assess competency growth. A sample of 485 student teachers was selected through stratified random sampling from teacher education colleges across Kerala, ensuring representation across gender and locality. The General Teaching Competency Scale (GTCS) by B.K. Passi and M.S. Lalitha was used to assess five domains: planning, presentation, closing, evaluation, and classroom management, aligned with NCTE (2006) guidelines. Statistical methods such as mean, standard deviation, t-tests, and ANOVA were used to analyze changes in competencies and to assess the impact of demographic variables. This approach provided a strong basis for evaluating the effectiveness of teacher education programmes.

IV. RESULTS AND DISCUSSION

3.1. Entry-Level Teaching Competencies

HYPOTHESIS 01: There is no significant difference in entry-level teaching competencies with reference to the gender of student teachers.

Table 01
Gender Wise analysis of Entry-Level Teaching Competencies

Teaching Competencies	Gender	N	Mean	Std. Deviation	t	Sig.
Planning	Male	53	19.45	8.60	0.24	N S
	Female	432	19.64	4.98		
Presentation	Male	53	48.73	11.55	2.45*	S
	Female	432	53.14	12.44		
Closing	Male	53	9.15	1.97	1.86	N S
	Female	432	9.78	2.36		
Evaluation	Male	53	8.79	2.47	1.62	N S
	Female	432	9.40	2.62		
Classroom Management	Male	53	9.01	2.77	1.32	N S
	Female	432	9.52	2.59		

The table indicates that there exists a significant difference in presentation competency of student teachers. The comparison of mean scores revealed that the female student teachers (mean score 53.14) exhibit high presentation competency of teaching in comparison with male student teachers (mean score 48.73) in entry level.

3.2. Locality Wise Analysis of Entry-Level Teaching Competencies

HYPOTHESIS 02: There is no significant difference in entry-level teaching competencies of student teachers with reference to their locality.

Table 02
Locality Wise Analysis of Entry-Level Teaching Competencies

Teaching Competencies	Locality	Sum of Squares	df	Mean Square	F	Si g.
Planning	Between Groups	106.83	2	53.41	1.77	N S
	Within Groups	14472.61	482	30.02		
	Total	14579.45	484			
Presentation	Between Groups	531.43	2	265.71	1.72	N S
	Within Groups	74079.11	482	153.69		
	Total	74610.54	484			
Closing	Between Groups	19.14	2	9.57	1.77	N S
	Within Groups	2604.01	482	5.40		
	Total	2623.16	484			
Evaluation	Between Groups	9.91	2	4.95	0.72	N S
	Within Groups	3301.26	482	6.84		
	Total	3311.18	484			

Classroom Management	Between Groups	10.55	2	5.27	0.77	N S
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Table shows that there is no significant difference in the entry-level teaching competencies of student teachers with reference to their locality.

3.3. Gender Wise Exit Level Teaching Competencies
HYPOTHESIS 03: There is no significant difference in exit level teaching competencies of student teachers with reference to their gender.

Table 03
Gender Wise Analysis of Exit Level Teaching Competencies

Teaching Competencies	Gender	N	Mean	Std. Deviation	t	Si g.
Planning	Male	53	23.22	3.17	0.69	N S
	Female	432	22.81	4.12		
Presentation	Male	53	63.69	7.30	1.16	N S
	Female	432	61.96	10.52		
Closing	Male	53	11.62	1.40	1.72	N S
	Female	432	11.09	2.16		
Evaluation	Male	53	11.49	1.91	0.54	N S
	Female	432	11.31	2.23		
Classroom Management	Male	53	11.47	1.78	0.40	N S
	Female	432	11.31	2.67		

Table 03 indicates that there is no significant difference in exit level teaching competencies of student teachers with reference to their gender.

3.4. Locality Wise Exit Level Teaching Competencies

HYPOTHESIS 04: There is no significant difference in exit level teaching competencies of student teachers with reference to their locality.

Table 04
Locality Wise Analysis of Exit Level Teaching Competencies

Teaching Competencies	Locality	Sum of Squares	df	Mean Square	F	Si g.
Planning	Between Groups	.20	2	0.10	0.00	NS
	Within Groups	7850.81	482	16.28		
	Total	7851.01	484			
Presentation	Between Groups	7.95	2	3.97	0.03	NS
	Within Groups	50633.44	482	105.04		
	Total	50641.40	484			
Closing	Between Groups	3.7	2	1.89	0.42	NS
	Within Groups	2132.93	482	4.42		
	Total	2136.70	484			
Evaluation	Between Groups	1.94	2	0.97	0.20	NS

	Within Groups	2345.94	482	4.86		
	Total	2347.88	484			
Classroom Management	Between Groups	4.49	2	2.24	0.33	NS

The table indicates that there is no significant difference in exit level teaching competencies of student teachers with reference to their locality.

3.5. Analysis of Entry and Exit Level Teaching Competencies

HYPOTHESIS 05: There is no significant difference between entry and exit level teaching competencies of male student teachers.

Table 5
Differentiation of Entry and Exit Level Teaching Competencies of Male Student Teachers

Teaching Competencies	Level	Mean	N	Std. Deviation	df	t	Si g.
Planning	Entry	19.45	53	8.60	52	3.06*	S
	Exit	23.22	53	3.17			
Presentation	Entry	48.73	53	11.55	52	7.54*	S
	Exit	63.69	53	7.30			
Closing	Entry	9.15	53	1.97	52	7.82*	S
	Exit	11.62	53	1.40			
Evaluation	Entry	8.79	53	2.47	52	5.92*	S
	Exit	11.49	53	1.91			
Classroom management	Entry	9.01	53	2.77	52	5.76*	S

The table 5 shows differences in the entry and exit level teaching competencies of male student teachers in all areas.

3.6. Difference in Entry and Exit Level Teaching Competencies of Female Student Teachers

HYPOTHESIS 06: There is no significant difference between entry and exit level teaching competencies of female student teachers.

Table 6
Differentiation of Entry and Exit Level Teaching Competencies of Female Student Teachers

Areas of competency	Level	Mean	N	Std. Deviation	df	t	Si g.
Planning	Entry	19.64	432	4.98	431	11.08*	S
	Exit	22.81	432	4.12			
Presentation	Entry	53.14	432	12.44	431	11.88*	S
	Exit	61.96	432	10.52			
Closing	Entry	9.78	432	2.36	431	8.85*	S
	Exit	11.09	432	2.16			
Evaluation	Entry	9.40	432	2.62	431	11.70*	S
	Exit	11.31	432	2.23			
Classroom management	Entry	9.52	432	2.59	431	9.96*	S
	Exit	11.31	432	2.67			

The table 6 shows differences in the entry and exit level teaching competencies of female student teachers in all areas.

3.7. Difference in Entry and Exit Level Teaching Competencies of rural Student Teachers

HYPOTHESIS 07: There is no significant difference between entry and exit level teaching competencies of student teachers of rural area.

Table 07
Differentiation of Entry and Exit Level Teaching Competencies of Rural Student Teachers

Areas of competency	Level	Mean	N	Std. Deviation	df	t	Si g.
Planning	Entry	19.24	281	5.92	280	9.04*	S
	Exit	22.85	281	3.98			
Presentation	Entry	51.78	281	12.76	280	10.85*	S
	Exit	62.22	281	10.27			
Closing	Entry	9.54	281	2.34	280	9.39*	S
	Exit	11.22	281	2.01			
Evaluation	Entry	9.22	281	2.68	280	10.19*	S
	Exit	11.38	281	2.25			
Classroom management	Entry	9.34	281	2.68	280	10.31*	S
	Exit	11.31	281	2.67			

The table 5.62 shows differences in the entry and exit level teaching competencies of student teachers belongs to rural locality in all competency areas.

3.8. Difference in Entry and Exit Level Teaching Competencies of urban Student Teachers

HYPOTHESIS 08: There is no significant difference between entry and exit level teaching competencies of student teachers of urban area.

Table 08
Differentiation of Entry and Exit Level Teaching
Competencies of Urban Student Teachers

Areas of competency	Level	Mean	N	Std. Deviation	df	t	Sign.
Planning	Entry	20.40	94	4.61	93	4.86*	S
	Exit	22.84	94	3.48			
Presentation	Entry	54.20	94	12.10	93	5.75*	S
	Exit	61.89	94	7.80			
Closing	Entry	9.96	94	2.24	93	4.08*	S
	Exit	11.05	94	1.83			
Evaluation	Entry	9.56	94	2.39	93	5.96*	S
	Exit	11.25	94	1.70			
Classroom management	Entry	9.58	94	2.51	93	5.22*	S

The table 8 shows differences in the entry and exit level teaching competencies of student teachers belongs to urban locality in all competency areas.

IV. INTERPRETATION OF RESULTS

Gender-Based Entry-Level Competencies Analysis shows no significant difference in entry-level teaching competencies between male and female student teachers, except in presentation, where females ($M = 53.14$) outperformed males ($M = 48.73$), indicating stronger initial communication skills.

Locality-Based Entry-Level Competencies There were no significant differences across planning, presentation, closing, evaluation, or classroom management based on students' locality, suggesting similar baseline competencies across geographic regions.

Gender-Based Exit-Level Competencies At the end of the programme, no significant differences were found in teaching competencies between genders, indicating that the training effectively supports equal professional growth.

Locality-Based Exit-Level Competencies Exit-level results show no significant differences based on locality, suggesting consistent training outcomes regardless of students' geographic background.

Competency Growth: Male Students Male student teachers showed significant improvements in all five teaching domains from entry to exit, confirming the programme's positive impact.

Competency Growth: Female Students Female students also made significant gains across all domains, especially in presentation and evaluation. **Rural Student Improvement** Rural students demonstrated notable growth in all competencies, confirming training effectiveness despite geographic challenges.

Urban Student Improvement Urban students also showed significant improvement across all domains, reinforcing the overall effectiveness of the programme.

V. EDUCATIONAL IMPLICATIONS

Programme Structuring: Teacher education curricula should incorporate structured practice teaching over two academic years for deeper competency development.

Soft Skills Integration: Special emphasis should be given to classroom management and interpersonal skills during pre-practice phases.

Standardization: A common framework for lesson planning and evaluation should be adopted across institutions.

Training Customization: Additional support mechanisms should be provided to students with lower initial competencies.

CONCLUSION

The study confirms that teacher education programmes in Kerala are moderately effective in building teaching competencies, with measurable improvement from entry to exit levels. There is a pressing need to reimagine and restructure these programmes to foster reflective, competent, and adaptive teaching professionals. Continuous monitoring, standardized assessments, and innovative training practices will further ensure the readiness of future educators to meet classroom challenges.

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