



RELATIONSHIP BETWEEN TEACHING COMPETENCY AND SELF-EFFICACY OF PRE-SERVICE TEACHERS

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Abstract: This study investigates the relationship between teaching competency and self-efficacy of pre-service teachers and also examining its differences in their teaching competency with regard to their perception of self-efficacy, gender and type of college management. The research aims to contribute knowledge into the evolving setting of teacher education. For this investigation, 120 pre-service teachers randomly selected from ten B.Ed. Colleges situated at Bengaluru City affiliated to Dr. Manmohan Singh Bengaluru City University, Bengaluru. Employing a descriptive survey method, the study utilizes surveys to collect data from pre-service teachers about teaching competency and self-efficacy, supplemented by personal proforma. Self-constructed tool of Teaching Competency Scale and Self-Efficacy Scale were considered to know the competency in teaching and their self-efficacy of pre-service teachers. Data was collected from student teachers through an offline survey. Statistical techniques namely Karl Pearson's Product Moment Coefficient of correlation and independent t-test were applied to analyze the results. The SPSS Package along with MS Excel applications was considered and the level of significance was fixed at 0.05 and 0.01 level of confidence. By exploring the variations in teaching competency with respect to self-efficacy, gender and type of management, the research seeks to provide perspectives on professional development strategies. The findings aspire to inform educational practices, addressing global trends and challenges in the contemporary realm of teacher education.

Index Terms - Teaching Competency, Self-Efficacy, Gender, Type of College Management, Pre-Service Teachers.

1. INTRODUCTION

Teaching competency is one of the most important qualities of an effective teacher. It includes subject knowledge, teaching skills, classroom management, communication, lesson planning and the ability to create a positive learning environment. Teacher education programmes aim to develop these competencies among pre-service teachers so that they are well prepared for the teaching profession. The National Education Policy (NEP), 2020 also emphasizes competency-based teacher education to improve the quality of school education.

One of the important psychological factors that influence teaching competency is self-efficacy. Self-efficacy refers to an individual's belief in his or her ability to successfully perform a task. In teacher education, self-efficacy refers to the confidence that pre-service teachers have in planning lessons, managing classrooms, motivating students and achieving learning outcomes. Teachers with high self-efficacy are generally more confident, enthusiastic and effective in their teaching practices.

Several studies have reported a positive relationship between self-efficacy and teaching competency. Desiriani, Kristiawan and Wardiah (2023) found that self-efficacy significantly improves teachers' professional competence. Similarly, Asare and Amo (2023) reported that teaching engagement efficacy enhances classroom participation and instructional effectiveness among pre-service teachers. Karvonen, Ratinen and Kemi (2023) also found that self-efficacy contributes to professional and sustainability competencies among future teachers.

In the Indian context, Lilly and Venukapalli (2023) reported that emotional intelligence positively influences the self-efficacy of pre-service teachers. Shukla (2024) found a significant positive relationship between teacher competence and self-efficacy among secondary school teachers. Kaur, Kaur and Bala (2024) observed differences in teachers' self-efficacy based on demographic variables, while Sarkar and Roy (2024) emphasized that self-efficacy plays an important role in implementing inclusive education successfully. Wang et al. (2024) further reported that teaching practice strengthens the self-efficacy and pedagogical beliefs of pre-service teachers.

Although many studies have examined teaching competency and self-efficacy separately, only a limited number of studies have explored their relationship among pre-service teachers in the Indian context. Therefore, the existed study aims to examine the relationship between teaching competency and self-efficacy among pre-service teachers. The findings may helps to teacher educational institutions strengthen teacher preparation programmes and improve the professional readiness of future teachers.

2. SIGNIFICANCE OF THE STUDY

The present study is important because it examines the relationship between teaching competency and self-efficacy among pre-service teachers. Effective teaching requires not only professional knowledge and teaching skills but also confidence in one's ability to teach successfully. Self-efficacy helps teachers face classroom challenges, motivate students and improve learning outcomes.

Previous studies have shown that teachers with high self-efficacy demonstrate better teaching competency. Desiriani, Kristiawan and Wardiah (2023) found that self-efficacy enhances professional competence, while Asare and Amo (2023) reported that teaching engagement efficacy improves instructional effectiveness among pre-service teachers. Shukla (2024) also found a positive relationship between teacher competence and self-efficacy.

The study will help teacher educators understand the importance of developing self-efficacy during teacher training. Lilly and Venukapalli (2023) reported that emotional intelligence contributes to higher self-efficacy among pre-service teachers and Wang et al. (2024) found that practicum experiences strengthen teachers' confidence and pedagogical beliefs. These findings suggest that teacher education programmes should provide opportunities that build confidence along with teaching skills.

The findings of the study will be useful for teacher educators, curriculum planners and policymakers in designing competency-based teacher education programmes. It will also contribute to the existing literature by providing evidence on the relationship between teaching competency and self-efficacy among pre-service teachers and help to improve the quality of future teachers.

3. REVIEW OF RELATED LITERATURE

Teaching competency is an essential characteristic of an effective teacher. It includes planning of lessons, classroom management, communication skills, teaching methods and evaluation techniques. Balasubramaniam (2019) found that B.Ed. student teachers generally possess moderate to high levels of teaching competency. Surekha and Ramakrishna (2023) reported that teaching competency differs according to the type of school management, while Nasir and Sultan (2023) found differences in teaching competency between male and female teachers. Vidyalakshmi and Praveena (2024) also reported satisfactory teaching competency among teacher educators.

Self-efficacy refers to teachers' confidence in their ability to perform teaching tasks successfully. Desiriani, Kristiawan and Wardiah (2023) found that teachers with higher self-efficacy demonstrate better professional competence. Asare and Amo (2023) reported that teaching engagement efficacy improves classroom interaction and student participation among pre-service teachers. Karvonen, Ratinen and Kemi (2023) found that self-efficacy contributes to developing professional and sustainability competencies in teacher education.

Indian studies also support the importance of self-efficacy. Lilly and Venukapalli (2023) found that emotional intelligence positively influences the self-efficacy of pre-service teachers. Shukla (2024) reported a significant positive relationship between teacher competence and self-efficacy among secondary school teachers. Kaur, Kaur and Bala (2024) observed that self-efficacy varies according to demographic factors, while Sarkar and Roy (2024) emphasized that teachers with higher self-efficacy are better prepared to implement inclusive education. Wang et al. (2024) further reported that teaching practice improves the self-efficacy and pedagogical beliefs of pre-service teachers.

Overall, the reviewed studies indicate that self-efficacy plays an imperative role in improving teaching competency. Teachers who believe in their abilities are more confident, motivated and effective in the classroom. Therefore, studying the relationship between teaching competency and self-efficacy among pre-service teachers is important for strengthening teacher education programmes.

Research Gap: The review of literature shows that many studies have examined teaching competency and self-efficacy separately and several studies have established a positive relationship between the two variables among school teachers. However, very limited research has focused specifically on pre-service teachers in the Indian teacher education context. Most previous studies have examined in-service teachers or teacher educators rather than B.Ed. trainees. Therefore, there is a need to study the relationship between teaching competency and self-efficacy among pre-service teachers. This research aims to fill this gap and provide useful suggestions for improving teacher education programmes.

4. STATEMENT OF THE PROBLEM

The topic identified for the current investigation is on "Relationship between Teaching Competency and Self-Efficacy of Pre-Service Teachers"

5. OBJECTIVES

1. To find out the relationship between teaching competency and self-efficacy of pre-service teachers.
2. To find out the effect of different levels of self-efficacy of pre-service teachers on their teaching competency.
3. To compare the teaching competency of male and female pre-service teachers.
4. To compare the teaching competency of pre-service teachers studying in private aided and private unaided colleges.

6. RESEARCH HYPOTHESES

The following hypotheses formulated for the present investigation:

1. There is no significant relationship between teaching competency and self-efficacy of pre-service teachers.
2. There is no significant difference in the Teaching Competency between pre-service teachers with different levels of self-efficacy.
3. There is no significant difference in the Teaching Competency between male and female pre-service teachers.
4. There is no significant difference in the Teaching Competency between pre-service teachers enrolled in private aided and unaided colleges.

7. METHODOLOGY

This study investigates the relationship between teaching competency and self-efficacy of pre-service teachers and also examining its differences in their teaching competency with regard to their perception of self-efficacy, gender and type of B.Ed. college management. The research aims to contribute knowledge into the evolving setting of teacher education. For this investigation, 120 pre-service teachers randomly selected from ten B.Ed. Colleges situated at Bengaluru City affiliated to Dr. Manmohan Singh Bengaluru City University, Bengaluru. Employing a descriptive survey method, the study utilizes surveys to collect data from pre-service teachers about teaching competency and self-efficacy, supplemented by personal proforma. Self-constructed tool of Teaching Competency Scale and Self-Efficacy Scale were considered to know the competency in teaching and their self-efficacy of Pre-service Teachers. Data were collected from student teachers through an offline survey. Statistical techniques namely Karl Pearson's Product Moment Coefficient of correlation and independent t-test were applied to analyze the results. The SPSS Package along with MS Excel applications was considered and the level of significance was fixed at 0.05 and 0.01 level of confidence.

8. DATA ANALYSIS AND INTERPRETATION

The data collected from the sample of pre-service teachers were analyzed using appropriate statistical techniques to test the formulated hypotheses. Karl Pearson's Product Moment Coefficient of Correlation was employed to examine the relationship between teaching competency and self-efficacy, while the Independent Samples *t*-test was used to determine the differences in teaching competency with respect to levels of self-efficacy, gender and type of B.Ed. college. The results of the statistical analysis are presented below along with their interpretations.

A Correlation Analysis

8.1 Analysis and Interpretation of Correlation between Teaching Competency and Self-Efficacy

Table-1: Correlation results pertained to Teaching Competency and Self-Efficacy of pre-service teachers (N=120; df=118).

Variable	Mean	Standard Deviation	'r' Value	Table Value	Results
Self-Efficacy	159.833	17.213	0.651**	0.228	Significant @ 0.01 level
Teaching Competence	177.941	18.316			

Table 1 shows the relationship between teaching competency and self-efficacy of pre-service teachers. The mean score of Self-Efficacy was 159.833 with a standard deviation of 17.213, whereas the mean score of Teaching Competency was 177.941 with a standard deviation of 18.316. The obtained correlation coefficient ($r = 0.651$) is higher than the table value (0.228) at the 0.01 level of significance. Hence, the null hypothesis is rejected. The result indicates a significant positive relationship between teaching competency and self-efficacy among pre-service teachers. This implies that pre-service teachers with higher self-efficacy tend to demonstrate higher teaching competency.

B. 't' Test Analysis

8.2 Analysis and Interpretation of Difference in Teaching Competency between Pre-Service Teachers with Low, Moderate and High Levels of Self-Efficacy

Table-2: Independent 't' test results related to Teaching Competency scores of pre-service teachers with regard to levels of self-efficacy.

Self-Efficacy	No.	Mean	Standard Deviation	Obtained 't' Value	Sig. level
Low	7	169.714	19.703	0.96 ^{NS}	Not Significant
Moderate	107	177.065	17.670		
Moderate	107	177.065	17.670	9.90**	Significant at 0.01 level
High	6	203.166	4.915		
Low	7	169.714	19.703	4.34**	Significant at 0.01 level
High	6	203.166	4.915		

(N=114; df=112, Table Value @ 0.05(*)=1.98; N=113; df=111, Table Value @ 0.01(**)=2.63; N=13; df=11, Table Value @ 0.01(**)=3.11)

Table 2 indicates that pre-service teachers with low self-efficacy (N = 7) obtained a mean teaching competency score of 169.714 with a standard deviation of 19.703, whereas those with moderate self-efficacy (N = 107) obtained a mean score of 177.065 with a standard deviation of 17.670. The obtained t-value (0.96) is less than the table value (1.98) at the 0.05 level of significance. Therefore, the null hypothesis is accepted. The findings indicate that there is no significant difference in teaching competency between pre-service teachers with low and moderate levels of self-efficacy.

Table 2 also indicates that pre-service teachers with high self-efficacy (N = 6) obtained a mean teaching competency score of 203.166 with a standard deviation of 4.915, whereas those with moderate self-efficacy (N = 107) obtained a mean score of 177.065 with a standard deviation of 17.670. The

obtained t-value (9.90) greater than the table value (2.63) at the 0.01 level of significance. Hence, the null hypothesis is rejected. The result indicates a significant difference in teaching competency between pre-service teachers with moderate and high levels of self-efficacy. Those with high self-efficacy possess significantly higher teaching competency.

The table further reveals that pre-service teachers with low self-efficacy (N = 7) obtained a mean teaching competency score of 169.714 with a standard deviation of 19.703, whereas those with high self-efficacy (N = 6) obtained a mean score of 203.166 with a standard deviation of 4.915. The obtained t-value (4.34) is greater than the table value (2.63) at the 0.01 level of significance. Hence, the null hypothesis is rejected. The result indicates a significant difference in teaching competency between pre-service teachers with low and high levels of self-efficacy. Those with high self-efficacy possess significantly higher teaching competency.

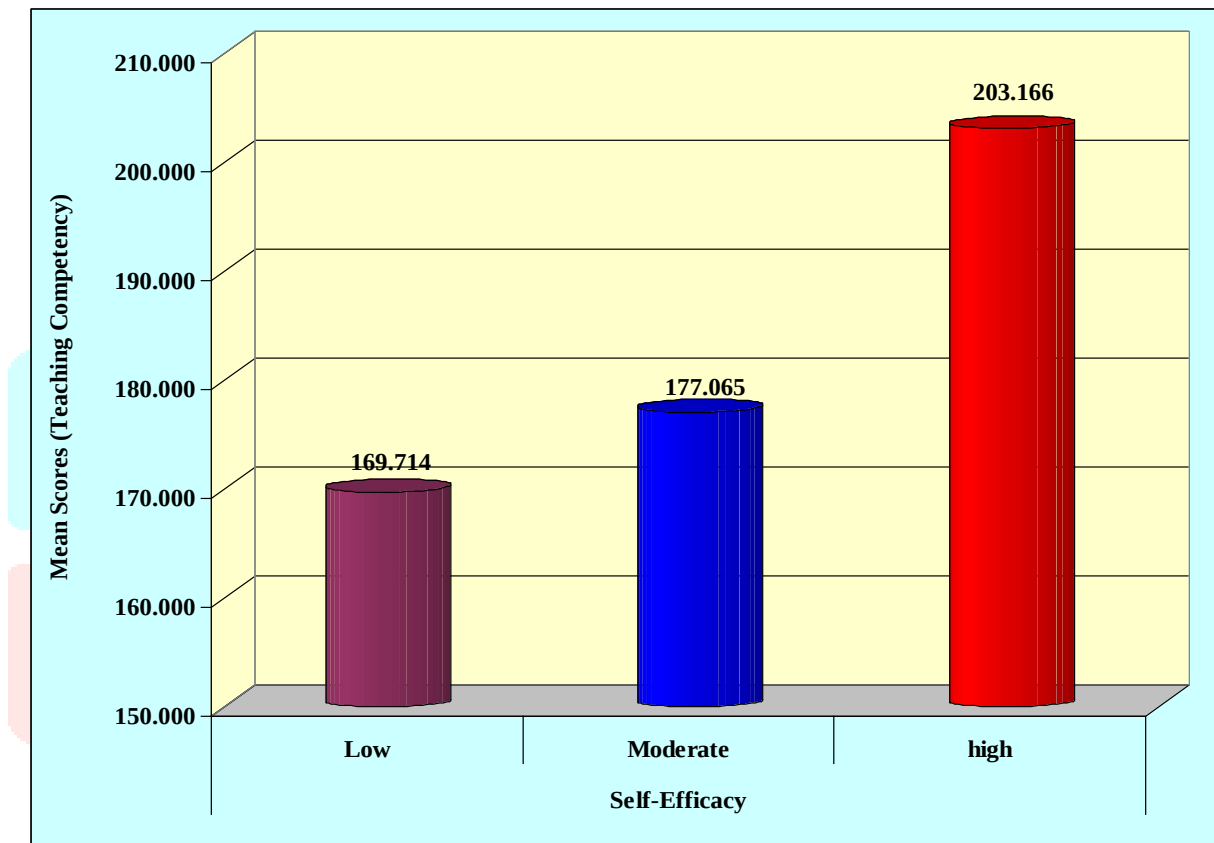


Fig.1: Comparison of teaching competency mean scores of pre-service teachers based on self-efficacy levels.

8.3 Analysis and Interpretation of Difference in Teaching Competency between Male and Female Pre-Service Teachers

Table-3: Independent 't' test results related to Teaching Competency scores of pre-service teachers with respect to gender.

Gender	No.	Mean	Standard Deviation	Obtained 't' Value	Sig. level
Male	33	173.424	17.047	1.74 ^{NS}	Not Significant
Female	87	179.655	18.581		

(N=120; df=118, Table Value @ 0.05(*))=1.98)

Table 3 shows that male pre-service teachers (N = 33) obtained a mean teaching competency score of 173.424 with a standard deviation of 17.047, whereas female pre-service teachers (N = 87) obtained a mean score of 179.655 with a standard deviation of 18.581. The obtained t-value (1.74) is less than the table value (1.98) at the 0.05 level of significance. Hence, the null hypothesis is accepted. The result indicates that there is no significant difference in teaching competency between male and female pre-service teachers.

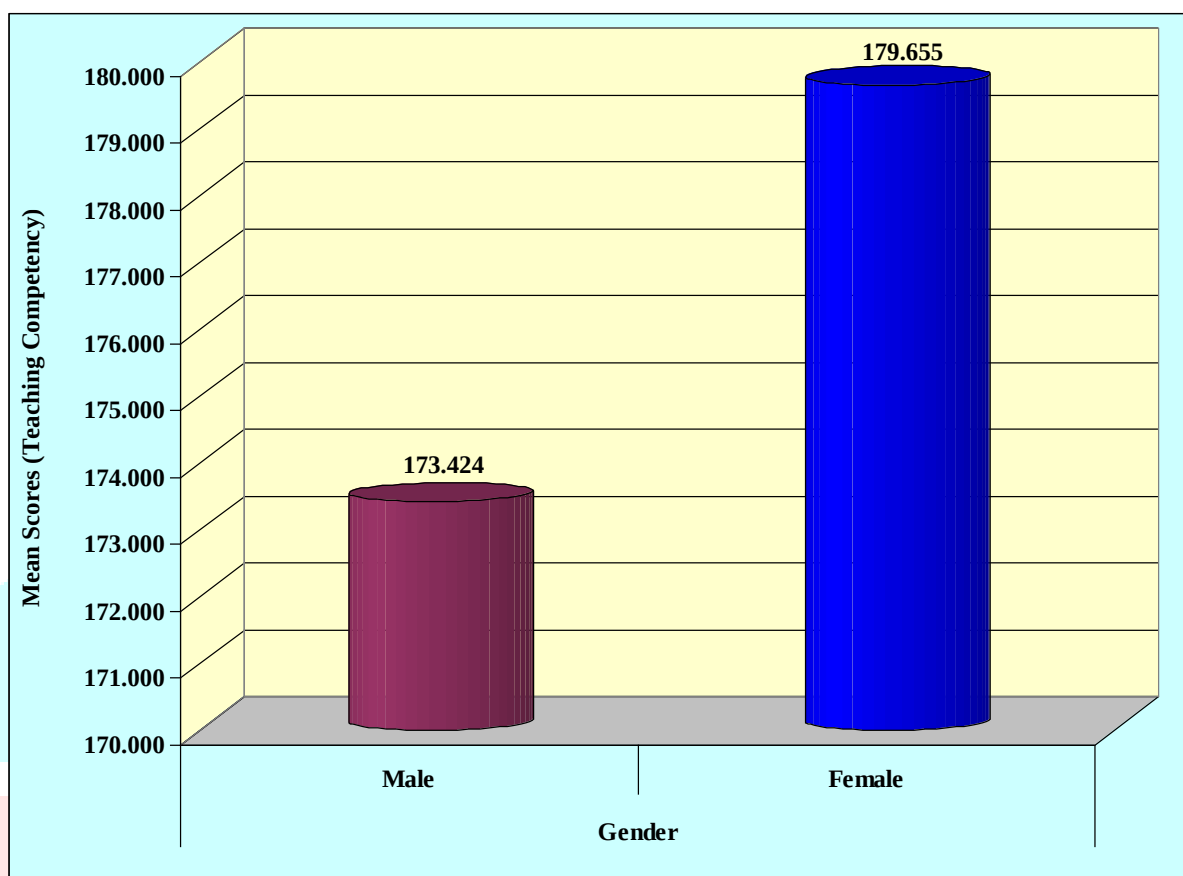


Fig.2: Comparison of teaching competency mean scores of pre-service teachers based on gender.

8.4 Analysis and Interpretation of Difference in Teaching Competency between Pre-Service Teachers Studying in Private Aided and Private Unaided B.Ed. Colleges

Table-4: Independent 't' test results related to Teaching Competency scores of pre-service teachers with respect to type of B.Ed. college.

Type of College	No.	Mean	Standard Deviation	Obtained 't' Value	Sig. level
Private Aided	60	179.616	14.272	1.00 ^{NS}	Not Significant
Private Unaided	60	176.266	21.615		

(N=120; df=118, Table Value @ 0.05(*)=1.98)

Table 4 reveals that pre-service teachers studying in private aided colleges (N = 60) obtained a mean teaching competency score of 179.616 with a standard deviation of 14.272, whereas those studying in private unaided colleges (N = 60) obtained a mean score of 176.266 with a standard deviation of 21.615. The obtained t-value (1.00) is less than the table value (1.98) at the 0.05 level of significance. Therefore, the null hypothesis is accepted. The findings indicate that there is no significant difference in teaching competency between pre-service teachers studying in private aided and private unaided B.Ed.

colleges. This suggests that the type of college management does not significantly influence the teaching competency of pre-service teachers.

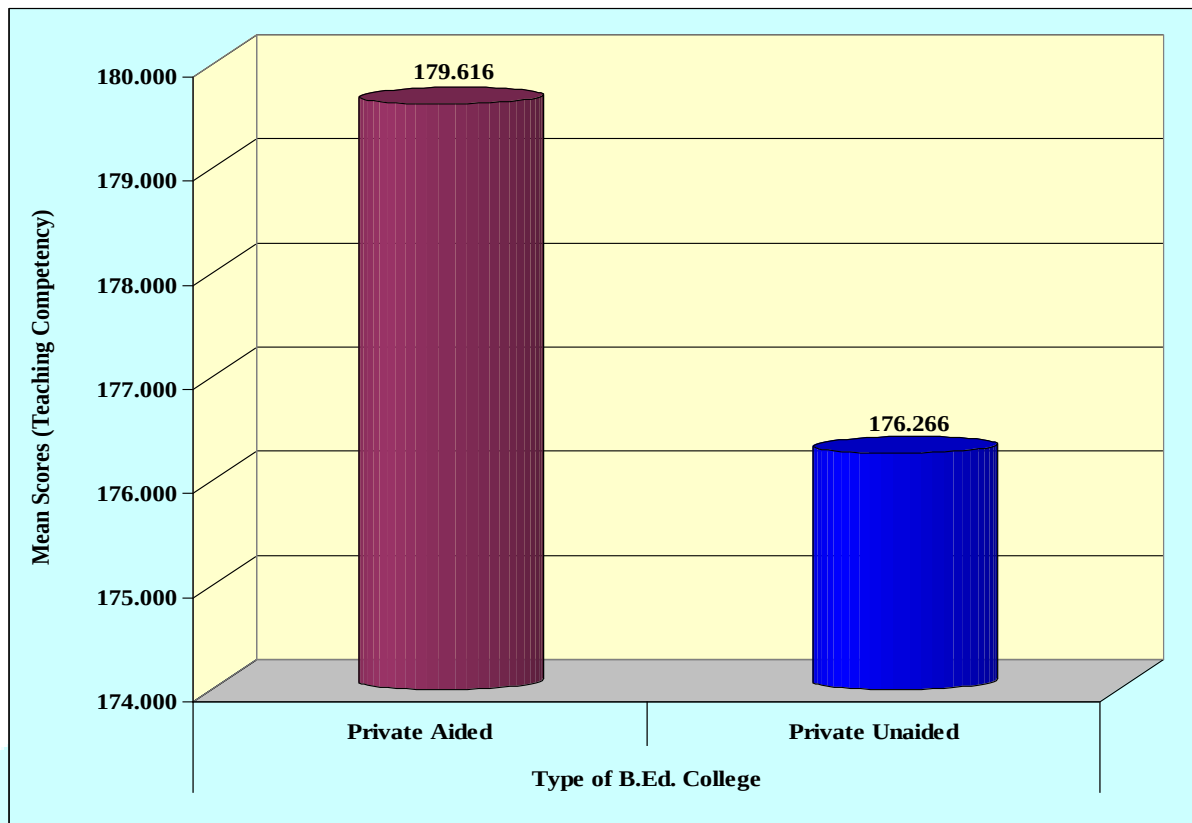


Fig.3: Comparison of teaching competency mean scores of pre-service teachers based on type of college.

9. FINDINGS

1. There was a positive significant relationship between Teaching Competency and Self-Efficacy of pre-service teachers ($r=0.651$; Sig. at 0.01 level)
2. There was no significant difference in the Teaching Competency of pre-service teachers with low and moderate levels of self-efficacy ($t=0.96$; Not Significant).
3. There was a significant difference in the Teaching Competency of pre-service teachers with moderate and high levels of self-efficacy ($t=9.90$; Sig. at 0.01 level).
4. There was a significant difference in the Teaching Competency of pre-service teachers with low and high levels of self-efficacy ($t=4.34$; Sig. at 0.01 level).
5. There was no significant difference in the Teaching Competency of male and female pre-service teachers ($t=1.74$; Not Significant level).
6. There was no significant difference in the Teaching Competency of pre-service teachers studying in private aided and private unaided B.Ed. colleges ($t=1.00$; Not Significant level).

10. DISCUSSION OF RESULTS

The present study revealed a significant positive relationship between teaching competency and self-efficacy among pre-service teachers. This finding supports the studies of Desiriani, Kristiawan and Wardiah (2023), who reported that teachers with higher self-efficacy demonstrate better professional competence and Shukla (2024), who found a positive relationship between teacher competence and self-efficacy. The finding is also consistent with Karvonen, Ratinen and Kemi (2023) and Wang et al. (2024), who emphasized that self-efficacy contributes to professional competency and improves through teaching practice.

The study found no significant difference in teaching competency between pre-service teachers with low and moderate levels of self-efficacy, whereas significant differences were observed between moderate and high and low and high self-efficacy groups. This indicates that very high self-efficacy contributes to better teaching competency. The findings support Asare and Amo (2023), who reported that teaching engagement efficacy improves classroom interaction and Lilly and Venukapalli (2023), who highlighted the importance of psychological factors in strengthening self-efficacy among pre-service teachers.

Further, no significant differences were found in teaching competency based on gender and type of B.Ed. college. This suggests that teaching competency is influenced more by individual confidence and professional preparation than by demographic or institutional factors. Overall, the findings confirm that enhancing self-efficacy among pre-service teachers can contribute significantly to the development of teaching competency.

11. CONCLUSION

The study concludes that self-efficacy is an important psychological factor influencing the teaching competency of pre-service teachers. A significant positive relationship exists between teaching competency and self-efficacy, indicating that higher self-efficacy is associated with better teaching competency. The study further concludes that pre-service teachers with high self-efficacy possess significantly better teaching competency than those with moderate or low self-efficacy. However, teaching competency does not differ significantly with respect to gender or the type of B.Ed. college. Therefore, strengthening self-efficacy during teacher education can enhance the professional competence of future teachers.

12. EDUCATIONAL IMPLICATIONS

The findings of the study suggest that teacher education institutions should incorporate activities that enhance the self-efficacy of pre-service teachers through micro-teaching, teaching practice, reflective learning, mentoring and constructive feedback. Teacher educators should provide supportive learning environments that encourage confidence, independent decision-making and problem-solving abilities. Workshops on communication skills, classroom management and professional development should be regularly organized to strengthen teaching competency. Since gender and type of college did not significantly influence teaching competency, equal opportunities for professional growth should be provided to all pre-service teachers. Teacher education programmes should focus on developing both pedagogical competence and self-efficacy to prepare confident, competent and effective future teachers.

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