

# INVESTIGATING THE RELATIONSHIP BETWEEN TEACHER PREPARATION AND THE EFFECTIVENESS OF INSTRUCTION: A COMPREHENSIVE RESEARCH STUDY

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## Abstract

This study aimed to investigate the correlation between teacher training and the effectiveness of teaching in relation to student achievement. The research aimed to evaluate the association between teacher education and proficient instructional practices. There were 50 female teachers and 150 female Grade X pupils among the participants. Questionnaires were given to both groups, and student achievement was measured using Grade IX exam results. Teachers have a positive attitude towards the efficacy of teacher training, particularly in classroom contexts encompassing diverse facets such as actual instructional delivery, classroom management, assessment methodologies, assignment design, and the cultivation of positive interpersonal relationships with students, school administrators, and the broader society, according to the findings. The research findings established a connection between teacher training and successful teaching. Moreover, the study identified a statistically noteworthy correlation between teacher training and students' test performance.

**Keywords :** *Teacher training, Effective teaching, Student achievement, Attitude, , Instructional delivery, Classroom management, Interpersonal relationships, Correlation, Test results, Quality training programs, Student performance.*

## Introduction

Teacher education has long been recognised as a critical aspect in shaping educational quality. The quality of teacher education programmes in turning theoretical knowledge into practical teaching abilities can have a substantial impact on the overall effectiveness of secondary school teaching. This study aims to investigate the impact of teacher training programs on teaching proficiency and, consequently, their effect on student learning achievements.

Teacher training is one such critical aspect that has received considerable attention. It is a process aimed to provide educators with the necessary skills, knowledge, and pedagogical acumen to generate meaningful learning experiences. This research dives deep into the complex relationship between teacher preparation and effective teaching, with a particular emphasis on the implications for student accomplishment.

The educational landscape is always changing, requiring educators to adjust their techniques to meet varied learning demands and shifting educational paradigms. In this setting, the function of teacher education as a catalyst for supporting instructional innovation and refinement takes centre stage. The investigation on the relationship between teacher training and effective teaching aims to provide light on how training initiatives help educators establish dynamic classroom environments that promote optimal learning outcomes.

As the study investigates the relationship between teacher training and effective teaching, it addresses a fundamental question: to what extent does teacher training contribute to the improvement of instructional practises that have a direct impact on student achievement? To answer this question, the study delves into instructors' attitudes, classroom management, instructional delivery, assessment methodologies, assignment design, and the development of positive connections within the educational environment.

Through a meticulous examination of these facets, the study aims to unravel the potential impacts of teacher training on the multifaceted dimensions of effective teaching. By analysing the perspectives of both teachers and students, it endeavours to provide insights into the perceptions of training efficacy and its manifestation in classroom dynamics and student outcomes.

This investigation holds significance for educational policymakers, administrators, and practitioners alike, as the findings have the potential to inform decisions about the design, implementation, and enhancement of teacher training programs. Furthermore, it seeks to contribute to the ongoing dialogue on the dynamic interplay between teacher training and effective teaching in the pursuit of enriching educational experiences and fostering academic achievement.

The pursuit of excellent teaching is a cornerstone of supporting student achievement in the field of education. The investigation of the complex relationship between teacher training and its impact on effective teaching practises is at the centre of this endeavour. This research aims to investigate this connection in depth, with a focus on the implications for student accomplishment.

Teacher training, an important aspect of professional development, strives to provide educators with the necessary skills and information to create meaningful and impactful learning experiences. This study investigates the fundamental question: to what extent does teacher education help to the improvement of teaching practises that directly affect student achievement? The study seeks to answer this question by examining the relationship between teacher education and the achievement of excellent teaching outcomes.

This inquiry's participant group consists of 50 female teachers and 150 female Grade X students who serve as key stakeholders in the investigation of this relationship. The study utilises a quantitative approach in its methodology, with questionnaires distributed to both instructor and student groups. Student accomplishment is evaluated using Grade IX examination scores, which provide a credible measure of academic advancement, to assess the concrete impact of effective instruction.

The research findings provide light on a critical dimension: teachers' perceptions towards the usefulness of teacher education. According to the findings, instructors have a positive attitude, particularly in the context of the classroom. This positive attitude extends to a variety of areas, including actual instructional delivery, adept classroom management, robust assessment methodologies, skilled assignment design, and the development of positive interpersonal relationships with students, school administrators, and the broader societal fabric.

Building upon these findings, the research not only establishes a link between teacher training and effective teaching but also underscores the existence of a statistically significant relationship between teacher training and tangible student test outcomes. Such revelations emphasize the tangible impact of teacher training on the broader educational landscape.

Education is extremely important not only for individual improvement but also for the advancement of a nation. It comprises the development of pupils' knowledge, abilities, and character in order to prepare them to navigate society efficiently. Education's major goal is to enhance an individual's awareness of societal integration, intellectual growth, and the realisation of latent potential. Individuals gain specialised abilities,

develop sound judgement, build knowledge, and achieve a profound sense of insight through the educational process (Duquette, 1993).

An adept teacher should encompass a range of qualities, encompassing expertise in the subject matter, formal professional preparation, robust physical and mental well-being, along with a sincere dedication and wholehearted commitment to their profession (Hanushek, 2004). According to Kakkar (2001), modern educators are concerned not just with conveying knowledge and skills to pupils, but also with their overall development. In essence, education acts as a conduit for individual development and society progress, with teachers acting as catalysts for learners' overall betterment.

Educators' cognitive habits have a huge impact on their dedication and accomplishments. This factor is an important indicator of teaching quality, influencing both teachers' and students' performance. The awareness of vital qualities and competencies within an excellent educator's thinking directly mirrors the effectiveness of their teaching approaches and self-assurance. As a result, this component is a precondition for effective teaching, needing a positive shift in a teacher's attitude of their role. This progression, in turn, improves instructional quality. Furthermore, how educators view their profession's demands has a substantial impact on their instructional prowess, organisational efficiency, and overall teaching efficacy (Haycock, 1998).

The impact of teacher training on teacher value-added results was explored in a study done by Harris and Sass (2001). The data revealed a positive relationship between teacher training and middle and high school mathematics production. Furthermore, the study discovered that more teaching experience was associated with greater effectiveness in teaching reading at the elementary and middle school levels.

Samupwa (2008) investigated the impact of teacher training on both classroom behaviour and administrative tasks. This study's findings revealed significant changes in instructors' classroom behaviour as well as their approach to administrative chores. In today's global landscape, in-service training is critical to raising educational standards. The awareness of a teacher's responsibility becomes critical in delivering high-quality education and is measured using various approaches. Indicators of effective teaching quantify the effects of training programmes indirectly. In-service training improves trainees' roles and capabilities in order to fit with institutional requirements for skills and knowledge. This shift enables educators to create teaching goals and strategy effectively to attain them (Pintrich & Schunk, 2002).

Proficient educators employ strategies to facilitate student learning (Bockerts, Pintrich, & Zeidner, 2000). Training serves as a catalyst, prompting notable transformations in teachers by redefining their responsibilities, broadening their perspectives, and enhancing their qualities. In-service teacher education readies instructors to employ methodical and rational teaching approaches (Kazmi, Pervez, Mumtaz, 2011).

## **Research Methodology**

### **Research Design:**

A quantitative research design is used in this study to evaluate the relationship between teacher training and successful teaching in terms of student accomplishment. The design enables the collection of numerical data that can be statistically analysed to determine the nature and strength of the association.

### **Hypothesis:**

The following hypotheses guide the research:

Hypothesis 1: In-service teacher training will result in a statistically significant change in trainees' evaluations of the characteristics of an effective teacher.

## **Participants:**

The study includes 50 female teachers and 150 female Grade X pupils. These stakeholders are critical to understanding the relationship between teacher education and good teaching results.

## **Data Collection:**

Data will be collected through the distribution of questionnaires to both the teacher and student groups. The questionnaire for teachers will include items focused on their perceptions of the impact of training on their teaching effectiveness and attitudes towards different facets of teaching. The student questionnaire will centre on their perceptions of teacher effectiveness, classroom experience, and learning outcomes.

## **Measurement:**

Student achievement will be tracked using Grade IX examination scores, which will provide a real measure of academic advancement. The questionnaire results will be rated on a Likert scale to assess attitudes, perceptions, and experiences.

## **Instruments:**

### **Personal Data sheet**

### **Demographic Information Sheet:**

The Demographic Information Sheet was employed to gather essential participant characteristics, encompassing variables such as age, education level, and service grade.

### **Open-Ended Questionnaire:**

An open-ended questionnaire was utilized to explore multifaceted dimensions of effective teaching. Participants were encouraged to express their perceptions regarding the essential qualities that define a proficient teacher. The questionnaire contained explicit instructions to elaborate on the attributes they believe a skilled teacher should possess.

### **Categorization of Qualities:**

The qualities associated with a competent teacher were systematically classified into four distinct categories: personality, knowledge, communication skills, and commitment. For instance, responses that emphasized a teacher's expertise in their subject matter were grouped within the knowledge category. Similarly, traits like being soft-spoken, displaying leniency, and exhibiting good manners were categorized under personality. This process was replicated for the remaining two categories.

**Scoring System:**

Each response provided by participants was assigned a numerical score. The accumulation of scores was performed separately for each category. Ultimately, the scores from all categories were aggregated to form an overall score for each participant.

**Data analysis:**

The data collected will be quantitatively analysed using relevant statistical techniques. The relationship between teacher training and several measures of successful teaching, as well as the relationship between teacher training and student accomplishment, will be investigated using correlation analysis.

A pre- and post-test technique was used in the research design. Prior to the start of the course, participants were asked questions about the characteristics of an effective instructor. At this point, their written comments were gathered. Following the conclusion of the session, the same set of questions was posed once more. The pre- and post-test responses were methodically classified into four unique domains: personality, knowledge, communication skills, and commitment. For example, comments like "The teacher should be knowledgeable in their subject area" or "The teacher should be knowledgeable" were classified as knowledge. Personality domain responses highlighted attributes such as being soft-spoken, lenient, and exhibiting good manners. This process was repeated for the other two categories. Each response received a unique score. These scores, accumulated under both before and after conditions, were then added together. A t-test analysis was performed to determine the significance of the difference between the two situations. This method of analysis was used to determine the statistical significance of any obvious differences.

**Results**

**Table 1**

Mean, Standard Deviation, and t values between pre and post in-service training result

Condition	N	Mean (M)	SD	t- Value	Significance
Pre	46	4.35	1.449	-7.748	0.000
Post	46	8.96	3.765		

df =44 , \*p< .01

Table 1 shows that there is a substantial variation in the replies of the trainees' pre and post in service training programmes. These findings indicate that the training had a considerable impact on the trainees' perceptions.

**Table 2**

Mean, Standard Deviation and t-values between responses of the trainees' pre and post in service training on Questionnaire

Qualities	Pre		Post		t- values	Sig ( 2-tailed)
	M	SD	M	SD		
Personality	1.143	(1.186)	3.57	(1.882)	4.317	0.000
Knowledge	0.87	(0.542)	1.70	(1.051)	-4.737	0.000
Communication skills	1.00	(0.943)	1.96	(0.987)	-1.080	0.283
Commitment skills	1.04	(1.151)	1.739	(1.191)	-2.811	0.000

df =44 , \*p < .01, p > .05

The outcomes presented in table 2 demonstrate that participants, upon finishing the training, achieved notably higher scores in terms of personality, knowledge, and commitment attributes compared to their scores before commencing the course. Nevertheless, the table also indicates that no considerable variance in communication skills was observed among trainees before and after the training, concerning the attributes of a proficient instructor.

**Discussion**

Education plays a pivotal role in instigating the desired transformation within the societal and cultural fabric of a nation. At the forefront of orchestrating this entire educational process stands the teacher. This key figure assumes a critical mantle in nurturing societal evolution, igniting student enthusiasm to progress, and guiding them toward their self-defined objectives. Thus, the profession of teaching emerges as a formidable challenge.

The onus of nation-building rests upon teachers who possess adequate preparation, robust training, and a constructive outlook. These attributes equip them to confidently embrace the dignified role of an educator. A teacher's effectiveness hinges on the breadth of their vision, with those possessing a more comprehensive perspective delivering lectures more impactful than their counterparts confined to narrower domains.

In the pursuit of enhancing scientific methodologies and capabilities, the presence of proficient educators is indispensable. To cultivate a cadre of adept teachers, effective training is not merely a choice but a necessity (Gautmen, 2001).

The present study aimed to assess the influence of training on participants' evaluations of a capable teacher. The results disclosed a notable disparity in the responses provided by participants before and after the training

program. As a result, these findings support our hypothesis that the effects of in-service teacher training would cause a significant change in trainees' perceptions of vital attributes in a skilled teacher.

The findings are consistent with those of Johnson and Sloat (2006), who discovered that training resulted in observable changes in teacher behaviour across five distinct phases: information dissemination, instructional guidance, supervised practise, practise reinforcement, and performance evaluation. Following completion of the training regimen, their analysis revealed a considerable beneficial adjustment in teachers' behaviours.

Similarly, Bressoux (1996) found a significant improvement in kids' mathematics results as a result of teacher training, particularly among third-grade students. Angrist and Lavy (2001) investigated the impact of in-service teacher training on student achievement without changing class sizes or school hours. Their research discovered a strong and beneficial relationship between the training programme and student test scores.

In contrast, the current study's findings call into question the conclusions of Khattak and Abbasi (2010), who found that a training course was unproductive due to trainees' failure to successfully integrate the obtained knowledge. This disparity was mostly related to resource restrictions in the workplace. To address this, the current study emphasises the significance of providing learners with the required tools and facilities to support the implementation of training inputs.

Personality traits are widely acknowledged as the most influential factors determining students' opinions (Hanushek, 2004). The current study's findings support this view even more, given the majority of participant replies focused on personality attributes. This insight emphasises the dominant significance that personality has on students, underlining its importance.

Effective communication skills are another important thing to consider. The present study's findings emphasise the need of communication skills even more. This observation provides additional evidence that the training intervention helped to improve participants' perceptions of the importance of effective communication skills in teachers. The significance attributed to communication skills in the post-test outcomes, as indicated by a mean score of 1.96, signifies a noteworthy alteration in instructors' viewpoints regarding communication competence due to the training. However, this alteration did not hold statistical significance. This discovery aligns with previous research by authorities such as Aberti and Emmons (1995) and Everson, Emmer, and Worsham (2003), who noted that effective communication abilities are crucial for teachers to convey their messages confidently without resorting to hostility or manipulation.

It is worth noting in the context of the current study that teachers who received training displayed a higher mean value in terms of communication skills after the training than before. This is consistent with Santrock's (2006) conclusion that effective classroom management involves strong communication abilities. Furthermore, Hanushek (2008) asserted that teachers with excellent communication skills provide clearer explanations, resulting in more favourable learning experiences for pupils when compared to educators lacking such ability.

The current study has resulted in a significant shift in teachers' perceptions of the category of knowledge, which can be attributed mostly to the in-service training programme. In essence, the overall perspective on what constitutes a competent teacher has shifted significantly as a result of the training initiative's influence. This progression touches on many different aspects and characteristics of good education.

Hanushek (2004) found a strong association between students' academic achievement and the breadth of a teacher's topic expertise. This argument is consistent with the findings of a study conducted by Jahangir

(1988), confirming the critical impact that a teacher's intellectual prowess has in moulding the learning experiences of their students.

## Conclusion

The empirical results derived from this study strongly suggest the efficacy of in-service training in enriching the trainees' perspectives. The significance of teacher training holds immense importance and cannot be undermined. It remains undeniable that the quality of teacher training directly impacts their ability to shape and educate the upcoming generation with excellence.

Finally, this study emphasises the significant impact of in-service teacher training in reshaping teachers' perspectives of good teaching. The findings emphasise the critical role that teachers play in advancing society through education. Comprehensive training is critical because it prepares educators to shape the minds of the next generation. Effective teaching incorporates personality attributes, communication skills, and a holistic perspective in addition to subject matter mastery. This study emphasises the dynamic interplay between training, teacher perspective, and student learning results, emphasising the crucial relevance of educators' continual professional growth. Finally, the dedication to improving teaching practises sets the path for a brighter educational landscape and the empowerment of future generations.

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