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EFFECT OF IN-SERVICE TRAINING ON TEACHER PROFESSIONAL DEVELOPMENT SKILLS AT SECONDARY LEVEL IN DISTRICT NAROWAL

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Abstract

The effect of in-service training on teacher professional development skills at the secondary level in district Narowal was the study's stated goal. The study's scope was restricted to Pakistan's Narowal District's 102 public secondary schools. A basic random sampling method was applied. 383 instructors from 102 male and female schools in both rural and urban areas made up the sample as a whole. The acquired data were expressed and subjected to analysis using descriptive statistics, simple linear regression, and the Pearson correlation coefficient. The conclusion that in-service training is essential for improving instructors' abilities and knowledge so they can give their students a high-quality education. One significant element that may have an effect on teachers' performance and general motivation is how satisfied they are with their in-service training. Secondary school teachers in the Narowal area have been actively engaged in a variety of in-service training programmes to enhance their pedagogical approaches and stay current on subject matter. Keywords: professional development skills for teachers, in-service training.

Keywords: *in-service training, teachers' professional development, secondary level, district Narowal*

Introduction

It is possible for a person to get training while doing their current duties. On-the-job training or in-service training are terms used to describe this kind of instruction. Enhancing an employee's abilities, knowledge, and skills can help them perform their tasks more successfully. In-service training can be provided by employers, mentors, and outside training organisations. The training can be provided in a variety of ways, such as online courses, workshops, seminars, coaching, and mentorship. The training is customized to the employee's job requirements and may cover a wide range of topics, including technical skills, customer service, communication skills, leadership abilities, and adherence to company norms and procedures (Nzarirwehi, & Atuhumuze, 2019). In-service training has advantages for both employers and employees. The person picks up new

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abilities and information, which may help with job satisfaction and career advancement. A more knowledgeable and skilled workforce is advantageous to the business since it can boost output, enhance work quality, and raise client happiness. The information, skills, and competencies that teachers acquire via continual practice, education, and preparation to improve their teaching abilities and the academic achievements of their students are referred to as teacher professional development skills (Singh, 2011). Teachers' professional development can take many different forms, including going to workshops and seminars, taking part in webinars and online courses, working with colleagues, getting coaching and mentorship, and conducting self-reflection and evaluation. Despite the fact that different viewpoints have led to the development of multiple definitions of in-service teacher training over time, researchers Dalila & Sandberg have discovered a sizable degree of agreement. The initial definition of the target group for in-service training is those who are actively practicing their profession right now. The definition of a profession specifies the training's subject matter (Fukkink, et al., 2019). Includes all of the techniques used by experts to help students advance their professional abilities or adjust to changing market conditions. As the phrase has evolved over time, in-service training has been supplanted by professional development (Ayvaz-Tuncel, & Çobanoğlu, 2018). Professional development programmers were referred to as in-service trainers in the business and academic worlds. The phrases "in-service training" and "professional development" will be used interchangeably in this line because this study also analyses past material. Some examples of teacher professional development skills include: To satisfy the various requirements of their students, teachers must have a thorough understanding of how pupils learn and be able to create engaging lesson plans. Teachers need to be extremely knowledgeable in the subjects they teach in order to convey information to their students in an efficient manner (Olujuwon, & Omiyale, 2021). Teachers need to be able to maintain discipline among their students, promote an inclusive and polite culture, and create a happy learning atmosphere. Teachers need to be adept at using technology into their classes in order to boost learning outcomes and student engagement (Lehiste, 2015).

To assist students perform better, teachers must be able to assess students' learning and provide feedback. Educators need to be lifelong learners, maintain ethical and professional standards, and interact with students, parents, and coworkers in a productive way. Beneficial teacher professional development can lead to increased student achievement and engagement, as well as higher job satisfaction and teacher retention rates. Through in-service training, teachers' knowledge, skills, and effectiveness in the classroom are developed to a significant extent (Amadi, 2013). The process is deliberate and ongoing, allowing educators to progress and evolve in their field of work on a constant basis. We shall discuss the value of in-service training for teacher professional development and its major influence on academic outcomes in this introduction. The area of education is dynamic and constantly changing in response to shifts in the curriculum, technology, instructional strategies, and student requirements. Teachers need to participate in continual professional development to meet these changing expectations. The foundation of this expansion is in-service training, which guarantees that teachers remain current and productive in the

classroom (Altun, 2011). A teacher's effectiveness directly influences the standard of education delivered to students. Teachers can improve their pedagogical approaches, classroom management techniques, and teaching strategies by participating in in-service training, which promotes continual improvement (Egert, et al., 2020).

It can help them deal with specific issues that they might have in the classroom. The educational landscape is always changing due to the introduction of new technologies, instructional strategies, and learning environments. Teachers acquire the information and abilities needed to properly adjust to these changes during in-service training. It gives them the freedom to employ innovative techniques, incorporate technology into their lessons, and modify their teaching to accommodate their students' evolving needs (Qaisra, & Haider, 2023). In addition to teaching, teachers act as mentors for their students. In-service training sets an example of lifelong learning by demonstrating to students that learning is a continuing and valuable endeavour. This mentality can encourage pupils to continue learning throughout their lives. In-service training's main objective is to raise student performance. The achievement, motivation, and engagement of students are directly impacted by well-trained teachers. Professional growth for instructors significantly improves their capacity to design engaging learning experiences and help students realize their full potential (Onalan, & Gursoy, 2020). Teachers have the chance to advance personally and professionally through in-service training. They can create objectives, experiment with novel teaching methods, and work together with colleagues to exchange best practices. These opportunities may be gratifying and fulfilling, which will raise your level of job satisfaction (Hansen-Thomas, et al., 2013).

To keep their teaching licenses or certifications, teachers must participate in continual professional development, which is mandated by many educational institutions and authorities. Teachers are kept in compliance with educational standards and ensured to achieve these needs through in-service training. There is typically a sense of camaraderie among educators because of in-service training. It gives educators a place to interact, cooperate, and encourage one another as they advance in their careers. The overall educational experience within a school or district can be improved by this collaborative environment (Quilapio, & Callo, 2022). A crucial part of teacher professional development that enables educators to adapt, develop, and flourish in their positions is in-service training. It is advantageous to teachers, their pupils, and the entire educational community. We will examine several facets of in-service training as we go deeper into the subject, including its techniques, best practices, difficulties, and implementation tactics.

Statement of the Problem

The issue is a dearth of knowledge regarding how in-service training affects teachers' professional growth at the secondary level in district Narowal. While it's common practice to offer in-service training to teachers to increase their abilities and knowledge, it's not apparent whether this instruction results in a materially better development of their professional abilities. Additionally, research is required to determine the precise in-service training programs that are most successful

in boosting teachers' professional development abilities, and to determine any elements that can undermine in-service training's efficiency. Without this knowledge, it is challenging to develop and carry out efficient in-service training programs that would eventually result in better student results. The effect of in-service training on teachers' professional development skills at the secondary level in district Narowal thus warrants further study.

Research Objectives

- To evaluate the teacher satisfaction level regarding in-service training at secondary schools in district Narowal.
- To investigate the level of professional development skills at secondary schools in district Narowal.
- To find out the effect of in-service training on teaching professionals at secondary schools in district Narowal.

Significance of the Study

The effect of in-service training on secondary school teachers' professional growth abilities is complex. Here are a few ways that in-service training might be helpful. Teachers can acquire the abilities and information they need to design more 6 successful and interesting learning experiences for their students with the aid of in service training. Higher achievement, better engagement, and greater success in post-secondary education and professions can all result from this, which can improve student outcomes. Teachers may have the chance to gain new abilities and knowledge that will help them improve in their professions through in-service training. This can involve seeking out leadership positions within their institutions, training to be instructional coaches, or going back to school. Teachers may feel more supported and competent in their responsibilities as a result of in-service training, which could improve retention and job satisfaction. This can lower turnover rates and help schools keep their best teachers. Teachers may get the chance to network with other experts in their industry through in-service training.

This can give them a support network for ongoing professional development as well as help them stay current with the most recent research and best practices. A supportive school culture in which teachers are always learning and developing can be influenced by in-service training. This can foster a friendly and cooperative environment where teachers can cooperate to enhance both student learning and teaching methods. In general, in-service training can have a big influence on teachers' professional growth abilities at the secondary level, which can increase student outcomes, career promotion, teacher retention, professional networking, and school climate. It is impossible to stress the importance of in-service training for teachers' professional growth at the secondary level in District Narowal and many other areas. Here are some crucial details emphasizing its significance in this particular context. Through in-service training, secondary-level teachers in District Narowal are given access to the most recent instructional strategies, subject-matter expertise, and classroom

management strategies.

This improves the standard of instruction given to pupils, leading to higher learning results. Educational standards and curriculum requirements frequently change. Through in-service training, instructors can stay current on curricular changes and be prepared to teach the required material and handle any new teaching issues. Students in the secondary grades have a range of learning needs and skills. Teachers who receive in-service training are better able to adapt their lesson plans to the diverse learning styles and academic levels of their pupils. Keeping an adolescent filled classroom under control can be difficult. The in-service training that teachers receive helps them to address behavioral concerns, maintain discipline, and provide an interesting learning environment. In-service training helps teachers create accurate and fair tests that are in line with learning goals. By doing this, it is ensured that students receive frank evaluations of their performance and helpful criticism. It's becoming more crucial than ever to include technology in schooling. Teachers in District Narowal receive the in-service training they need to develop the abilities necessary to use technology as a teaching tool and encourage digital literacy among pupils. Teachers who are interested and motivated in their work benefit from ongoing professional development opportunities provided through in-service training. Teachers are more likely to be passionate and successful mentors if they feel supported and prepared to manage their responsibilities.

Skilled educators can interact directly with parents and the neighborhood. Involving parents in their children's education, exchanging information about their kids' success, and developing good ties with the neighborhood can all contribute to a conducive learning environment. The secondary level's in-service training is in line with national education goals, which are intended to raise literacy rates and improve the standard of education. Direct teacher training helps to accomplish these goals. Teachers at the secondary level have the chance to advance their careers through in-service training. It might result in promotions, greater job satisfaction, and professional recognition, all of which might encourage educators to keep doing their best work. By providing secondary-level teachers with advanced training, District Narowal's educational system is guaranteed to maintain its competitiveness both locally and internationally. Students are better equipped to compete in a world that is becoming more linked. There are long-term economic and social benefits to funding teacher professional development at the secondary level. Students who receive a good education are more likely to make beneficial contributions to society, which stimulates economic growth and social advancement in District Narowal and beyond. In District Narowal, secondary-level in-service training for teacher professional development skills is of the utmost importance. It not only improves educational quality but also the district's general growth, the welfare of its pupils, and the community at large. Building a solid educational foundation for the future depends on it greatly.

Research Questions

- What is the teachers' satisfaction level on in-service training?

- What is the level of teachers’ professional development skills?
- What are the effects of in-service training on teaching professionals?

Overall Design of the Study

It was quantitative research with a casual-comparative research design. Casual- comparative to measure cause and effect of in-service training on teacher professional development skills from the population of grades 9th and 10th at the secondary level in the public sector in district Narowal. The philosophical paradigm of this research was positivism. Data collection is a method for gathering information, measuring, and analyzing factors that are connected to and covered in research questions and literature. Through this approach, researchers can evaluate the outcome. It is a crucial step in the research process. Data were gathered via a questionnaire. The researcher personally gathered data from primary and first-hand sources. Population comprises all the feasible instances (person, thing, and events) that make up a known whole, population selection is critical in the search process. A population is a group of people to whom the researcher wishes to apply his or her findings. The population of the study covered all teachers from Govt. Higher secondary schools of District Narowal. There were (766) teachers from 204 Govt. Higher secondary schools both boys (98) and girls (106) in District Narowal.

Table 1: Detail of population of district Narowal secondary schools

District Narowal population	Gender	Schools	Teachers
Narowal	Male	50	148
	Female	57	158
Shakargarh	Male	27	165
	Female	22	145
Zafarwal	Male	21	68
	Female	27	82
Total		204	766

Sampling is the procedure of choosing a representative part of a population to define the characteristics of the whole population (Almanthari, et al., 2020). The researcher used sample random sampling techniques to collect the data. A multistage sampling technique was used for this study to draw the sample.

In the first step whole population of the 9th and 10th grades of District Narowal was classified into two strata male and female by using a stratified sampling technique. The population was divided into three clusters based on tehsils by cluster sampling technique. Schools for each cluster were selected by a simple random sampling technique.

At the final stage, a sample of 383 teachers was drawn from male and female schools by simple random sampling. The sample size of his research was 383 teachers from 102 Govt Higher secondary schools of District Narowal. One hundred ninety-one males and one hundred ninety-two females were selected through availability criteria from each school.

Table 2: Detail of sample of district Narowal secondary schools

District Narowal population	Gender	Schools	Teachers
Narowal	Male	25	74
	Female	28	79
Shakargarh	Male	14	83
	Female	11	72
Zafarwal	Male	10	34
	Female	14	41
Total		102	383

In research, a variety of instruments are used to collect data, but the questionnaire is free from interviewer bias, gives respondents enough time to respond, is simple for those who are difficult to approach, and most importantly can make the results more trustworthy and reliable. (R.C. Kothari 2004). The structured questionnaire was used for data collection. The five-point Likert scale was used as an instrument for the questionnaire.

The researcher utilized SPSS 22(statistical package for social science) to examine quantitative data by computing descriptive, Regression, and inferential statics, Frequency, Percentage, Mean, and Standard deviation for answers. The researcher utilized SPSS 22, which is a statistical package specifically designed for analyzing social science data. The purpose of using this software was to examine quantitative data collected for the study. To analyze the data, the researcher employed various statistical techniques. Firstly, descriptive statistics were calculated to summarize and describe the data. Additionally, regression analysis was conducted using SPSS. This statistical technique helps in exploring the relationship between one dependent variable and one or more independent variables. By performing regression analysis, the researcher aimed to understand how the answers to the survey questions were related to specific factors.

Data Analysis and Interpretations

Table 3: Demographic Information of Data

	Demographic Variable	Frequency	Percentage
Gender	Male	191	49.9
	Female	192	50.1
Age	30-40	183	47.8
	41-50	123	32.1
	51-60	77	20.1
Qualification	B. A/B.SC	38	9.9
	M.A/ M.SC	335	87.5
	MPhil	8	2.1
	PHID	2	.5
Experience	1-15	265	69.2
	16-30	90	23.5
	31-45	28	7.3
Tehsil	Narowal	154	40.2
	Shakargarh	155	40.5
	Zafarwal	74	19.3

Table represents the comprehensive overview of the group's demographic composition, educational qualifications, work experience, and geographical distribution across different tehsils. There were 191 males, making up approximately 49.9% of the total population.

There were 192 females in the group, accounting for about 50.1% of the total population. This balanced gender distribution ensured diverse perspectives and experiences within the group, fostering a more comprehensive understanding of the issues at hand.

The age distribution within the group was as follows:

There were 183 individuals in the 30-40 age category, representing approximately 47.8% of the total population. This youthful energy and enthusiasm was complemented by the seasoned expertise of the 123 individuals in the 41-50 age group, who accounted for around 32.1% of the population.

There were 77 individuals in the 51-60 age group, making up about 20.1% of the total population. Regarding educational qualifications, the group consists of individuals with various degrees. B.A./B.SC: There were 38 individuals with this qualification, constituting approximately 9.9% of the total population. M.A./M.SC:

There were 335 individuals with this qualification, accounting for around 87.5% of the total population. M.Phil: There were 8 individuals with M.Phil. Degrees, making up about 2.1% of the total population. Ph.D.: There were 2 individuals with Ph.D. degrees, representing about 0.5% of the total population. The group's work experience was categorized as follows. 1-15 years of experience:

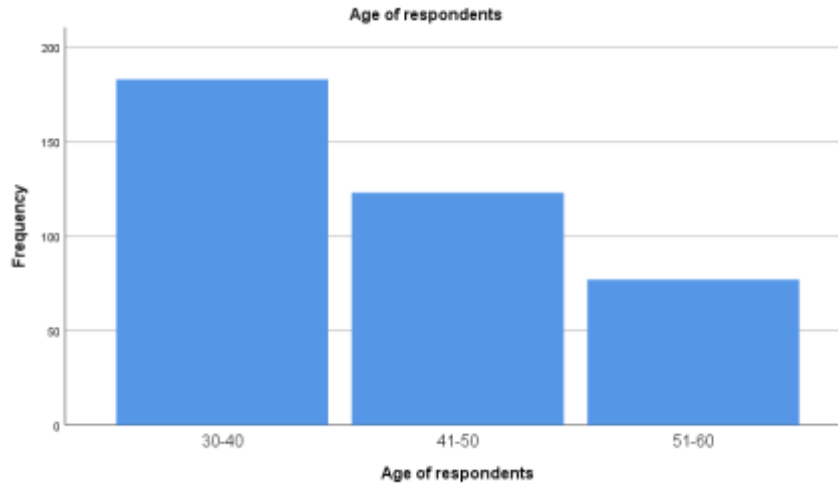
There were 265 individuals in this category, constituting approximately 69.2% of the total population. 16-30 years of experience: There were 90 individuals in this category, accounting for around 23.5% of the total population. 31-45 years of experience:

There were 28 individuals in this category, making up about 7.3% of the total population. The group was distributed across three tehsils as follows. There were 154 individuals from Narowal, representing approximately 40.2% of the total population.

There were 155 individuals from Shakargarh, accounting for around 40.5% of the total population. There were 74 individuals from Zafarwal, making up about 19.3% of the total population.

Table 4: Sample description on the basis of respondents' age

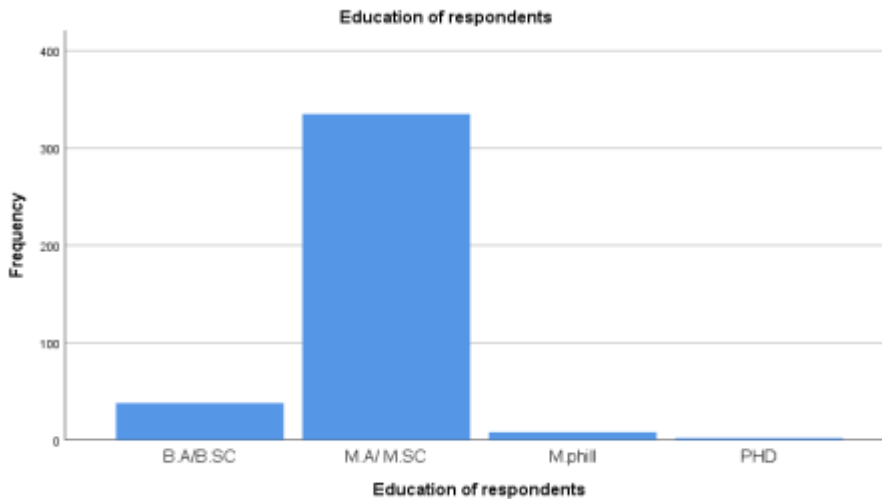
Age of respondents		Frequency	Percent	Valid Percent	Mean	S.D
Valid	30-40	183	47.8	47.8	1.72	.777
	41-50	123	32.1	32.1		
	51-60	77	20.1	20.1		
Total		383	100.0	100.0		



The above table illustrates that sample description on the basis of respondents' age. The overall mean is 1.77 and S.D=0.777.

Table 5: Sample description on the basis of respondents' Education

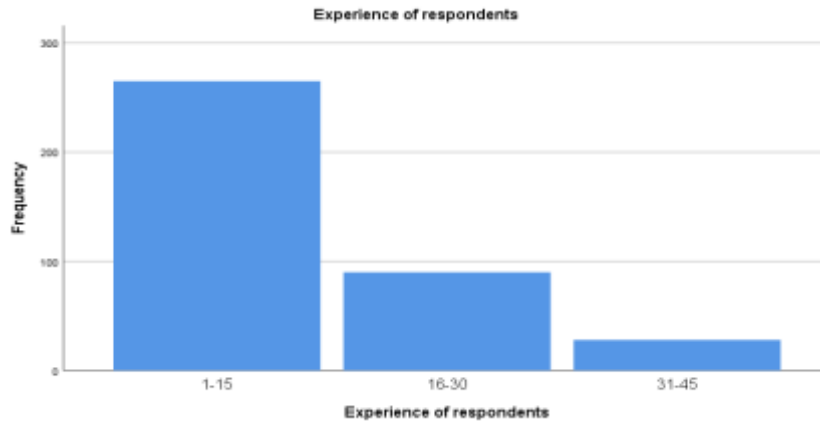
Education of respondents						
		Frequency	Percent	Valid Percent	Mean	S.D
Valid	B.A/B.SC	38	9.9	9.9	1.93	0.370
	M.A/ M.SC	335	87.5	87.5		
	M.Phil.	8	2.1	2.1		
	PHD	2	.5	.5		
Total		383	100.0	100.0		



The above table illustrates that sample description on the basis of respondents' education. The overall mean is 1.93 and S.D=0.370.

Table 6: Sample description on the basis of respondents' Experiences

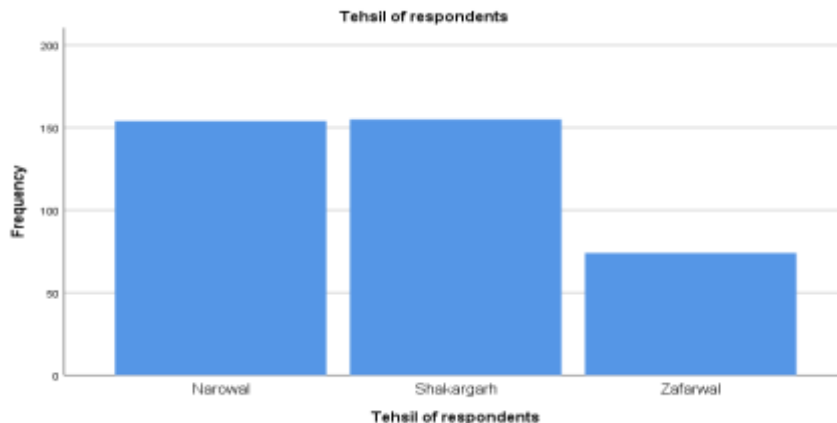
Experience of respondents		Frequency	Percent	Valid Percent	Mean	S.D
Valid	1-15	265	69.2	69.2	1.38	0.619
	16-30	90	23.5	23.5		
	31-45	28	7.3	7.3		
Total		383	100.0	100.0		



The above table illustrates that sample description on the basis of respondents' experience. The overall mean is 1.38 and S.D=0.619.

Table 7: Sample description on the basis of respondents' Locality

Tehsil of respondents		Frequency	Percent	Valid Percent	Mean	S.D
Valid	Narowal	154	40.2	40.2	1.79	0.744
	Shakargarh	155	40.5	40.5		
	Zafarwal	74	19.3	19.3		
Total		383	100.0	100.0		



The above table illustrates that sample description on the basis of respondents' Locality. The overall mean is 1.79 and S.D=0.744.

Table 8: Overall Sample description on the basis of Mean and Standard deviation

Descriptive Statistics			
	N	Mean	Std. Deviation
In-service training	383	4.0589	.31520
Teachers' professional development	383	4.1084	.27935

The above table illustrates that sample description on the basis of mean and standard deviation. The overall mean of in-service training is 4.06 and S.D=0.31, while teachers professional development mean is 4.10 and S.D=0.27. Overall, responses of the respondents were reflected toward the level of agreement.

In-service training

Research Objective 1

Table 9(A): To evaluate the teacher satisfaction level regarding in-service training at secondary schools in district Narowal

Descriptive Statistics			
	N	Mean	Std. Deviation
I really enjoyed the training arranged for teachers.	383	4.06	.676
The seminar room, staff, support, refreshment and basic facilities were good enough for training.	383	4.02	.697
The objectives of the training were clearly defined to me.	383	4.13	.473
The training environment were conducive for the learning.	383	4.08	.613
The training is beneficial for my professional career.	383	4.18	.615
The standard of provided training materials good.	383	4.02	.692
Resource persons are knowledgeable and skilled in their areas.	383	4.09	.649
I recommend this program to my co-workers.	383	4.07	.618
I have learned values, tradition, norms, laws, rules, regulations, patterns and processes involved in professional life of teachers.	383	4.08	.687
I have acquired information and knowledge of classroom management and instructional strategies.	383	4.02	.725
I have learned about how to deal with individual difference.	383	4.02	.665
I have learned about how to use ICT in classroom teaching.	383	3.89	.775
I have learned about the process of curriculum development and implementation framework.	383	4.03	.737
The course "measurement and Evaluation" has helped me in constructing good tests and assessing students learning.	383	4.07	.674
Training has helped me in using ICT in the classroom.	383	4.03	.671
The use of classroom management skills and knowledge of instructional strategies made me teaching more effective.	383	4.09	.630
The training on communication & presentation skills have helped me in delivering my lectures productively.	383	4.14	.618
The training has shifted my paradigm and motivated me towards my profession.	383	4.07	.561
After training, I felt students are punctual and regular.	383	4.02	.711
As a result of my post-training teaching, students were enthusiastic and took keen interest in learning process.	383	4.10	.604

Table 9(B): To evaluate the teacher satisfaction level regarding in-service training at secondary schools in district Narowal

As a result of my training, the students showed good results.	383	4.04	.672
I faced problems in implementing the training techniques.	383	3.98	.794
Overcrowded classroom affects the teaching-learning process.	383	4.13	.646
Lack of physical resources affects the learning environments.	383	4.12	.680
Lack of cooperation affects the implementation of training.	383	4.00	.762

The above table illustrates that overall mean and standard deviation of in-service training items. The level of teacher satisfaction regarding in-service training at the secondary level. This shows that the level of teacher satisfaction was moderately presented as agreed ($M=4.058$; $SD=.315$) at the secondary level. The overall responses of the respondents reflected the moderate agreement level of teacher satisfaction regarding in-service training.

Teachers' professional development

Research Objective 2

Table 10: To investigate the level of teacher professional development skills at secondary schools in district Narowal

I do plan strategies to overcome students' discourteous attitude during teaching process.	383	4.02	.718
Reflection on actions after class is helpful to review the shortcoming of lesson.	383	4.05	.551
I allow my students to provide their feedback.	383	4.14	.598
Students' feedback is helpful to overcome shortcomings of my teaching style.	383	4.15	.556
When i teach to the students, I reflect over class room discipline to maintain class-room momentum.	383	4.13	.607
Sharing of class room experiences with colleagues is helpful improve teaching skills.	383	4.09	.574
Audio-video taping of lesson is helpful to identify professional mistakes.	383	4.09	.624
I reflect over my interaction with colleagues, peers& school staff to improve my relations with them.	383	4.13	.614
Reflection on my own actions is helpful to change the weaknesses into strengths.	383	4.06	.616
I can improve my teaching skills through audio videotaping of my lesson.	383	4.14	.549
During teaching process, i plan strategies to maintain classroom discipline.	383	4.10	.578
I feel an intra- conflict during my lesson is helpful to understand my professional weaknesses.	383	3.96	.746
Audio video recording of lesson is helpful to understand my professional weaknesses.	383	4.08	.686
At the end of lesson, i reflect over the learning outcomes of my lesson.	383	4.14	.590
Preparation of portfolios is better source to improve me teaching skills.	383	4.10	.613
In the light of comments passed by the peers, i attempt to improve my teaching skills.	383	4.13	.728
I reflect over my practices to improve my pedagogical skills.	383	4.07	.560
When i face un-expected situation in the class room, i discuss about the situation with my colleagues to find out the solutions.	383	4.11	.634
Through involvement in reflective practices i can solve all my professional problems.	383	4.09	.565
I reflect over my teaching to confirm that i am teaching to fulfill community needs.	383	4.15	.533
When i assign home work to the students, i have a concern about creative aspect of the work.	383	4.17	.559
I attempt to improve my lesson planning skills (e.g searching out material, completion of teaching tasks on time).	383	4.16	.568
I attempt to identify slow learners and attempt to assign them easier assignments.	383	4.09	.645
I learn from my peers about school record during teaching practicum.	383	4.10	.586
Audio- video taping of lesson is helpful to improve me communication skills.	383	4.25	.600

The above table illustrates that overall mean and standard deviation of teachers’ professional development items. Table presents the level of teachers’ professional development skills at the secondary level. This shows that the level of teacher professional development skills was moderately presented as agreed (M=4.1084; SD=.27935) at the secondary level. The overall responses of the respondents reflected the moderate agreement level of professional development skills of teachers.

Research Objective 3

To find out the effect of in-service training on teaching professionals at secondary schools in district Narowal.

Table 11: Regression1 (Regression of in-service training on teacher professional development skills)

Model Summary				
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
	.776 ^a	.602	.601	.17646

a. Predictors: (Constant), IST

Table shows the regression result of the effect of in-service training on teacher professional development skills at the secondary level. The R-square value is .602 which implies that the independent variable i.e. in-service training causes a 60.2% change in the dependent variable.

Table 12

ANOVA ^a					
Model	Sum of Squares	df	Mean Square	F	Sig.
Regression	17.945	1	17.945	576.282	.000 ^b
Residual	11.864	381	.031		
Total	29.809	382			

a. Dependent Variable: TPDS

b. Predictors: (Constant), IST

Table shows the ANOVA results for in-service training (F=576.282; p<0.05) Hence there is a significant effect of the independent i.e. in-service training on the dependent variable i.e. teacher professional development skills.

Table 13

Coefficients ^a					
Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
(Constant)	1.317	.117	.776	11.297	.000
IST	.688	.029		24.006	.000

a. Dependent Variable: TPDS

Table presents the coefficients results. As shown in the table effect of teacher professional development skills (beta value=.776; t=24.006; p=.000) exhibits that change independent variables in-service training by one unit brings about a change in dependent variable i.e. Teacher professional development by units 3.078.

Furthermore, beta values are positive which indicates the positive effect of in-service training on teacher professional development skills. In other words, when in-service training changes one unit, teacher professional development skills also change.

Discussion

The finding that in-service training was instrumental in enhancing teacher skills aligns with a body of previous research. Numerous studies (Darling-Hammond et al., 2017; Hofstede, 2001) have highlighted the positive impact of professional development, including in-service training, on teacher competencies and the quality of education provided (Ingersoll & Strong, 2011; Darling-Hammond et al., 2017). The recognition of the importance of teacher satisfaction in in-service training echoes previous research. Existing studies have investigated the relationship between teacher satisfaction and various aspects of their performance, motivation, and commitment (Skaalvik & Skaalvik, 2014; Klassen & Chiu, 2011). While this study emphasizes the positive impact of in-service training on teacher skills and satisfaction, the specific findings and implications may vary depending on the context, program design, and participant demographics. Different studies may uncover nuances or challenges related to in-service training that is unique to their particular settings (Kyriacou & Coulthard, 2000). Variations in research methodologies, including sample sizes, data collection techniques, and statistical analyses, can lead to differences in findings and interpretations. Some studies may employ qualitative approaches, while others may focus on quantitative measures, influencing the depth of insight into the relationships explored (Creswell & Creswell, 2017).

Acknowledging the importance of gauging teacher satisfaction regarding training programs aligns with prior studies. Teacher satisfaction is a key factor in evaluating the success and impact of professional development initiatives. On the other hand, this study explores the need for education authorities to use the satisfaction levels of teachers to make informed decisions and implement necessary changes is consistent with the broader goal of evidence-based educational policymaking. Previous research has also emphasized the importance of data-driven decision-making in education (Bryk et al., 2015; Hattie, 2009). This study was situated in the district of Narowal, which may have unique characteristics, challenges, and educational policies compared to other regions' previous research (Ingersoll & Strong, 2011) emphasis. Consequently, the findings and recommendations may have context-specific nuances that differ from studies conducted in other geographical areas (Fullan, 2014). In-service training programs can vary widely in terms of content, delivery methods, and duration. Findings from our study may be influenced by the specific characteristics of the training programs in the Narowal district. Comparing our results with studies on different training programs may yield insights into the impact of program design on teacher satisfaction. Cultural and social factors within the Narowal district may influence teacher satisfaction and perceptions of training effectiveness. These factors, which can be unique to the local context, may not be directly comparable to findings from studies in other regions.

The present study, related to previous research, identifies a moderate amount of variability in the amount of in-service training received by individuals. Variability in training participation is a common observation in workforce and educational studies. Recognizing that the observed variability in training can be attributed to a range of factors is consistent with the multifaceted nature of training participation. Prior research has explored various determinants of training engagement, including job roles, access to opportunities, and individual preferences (Holton et al., 2000). Our study contextualizes the variability in in-service training within a specific setting or sample. The factors influencing training levels may differ in other contexts, such as different industries, regions, or organizational types. Findings from our study may not be directly transferable to other populations (Arthur et al., 2003). While our study identifies a moderate level of variability, the specific quantification of this variability and the factors contributing to it may vary compared to other studies. Variability can be characterized differently depending on the measurement methods and criteria applied.

The examination of factors such as job roles, access to training opportunities, and individual preferences in our study may involve varying levels of detail and depth compared to previous research. Some studies may provide a more comprehensive exploration of these factors, while others may offer a broader overview (Noe, 2010). This study shares a common focus with previous research, which has emphasized the importance of professional development in education. Numerous studies have explored the impact of different forms of professional development on teacher practices and student outcomes (Darling-Hammond et al., 2017; Ingersoll & Strong, 2011). The aim of improving the quality of education for students aligns with the overarching goal of education research and policy. Previous studies have consistently sought ways to enhance teaching practices and educational outcomes to benefit students. Our study mentions "this form of professional development," which could refer to a specific type of training or program. The benefits and challenges associated with professional development can vary significantly depending on its nature, content, and delivery methods. Studies examining different forms of professional development may yield distinct findings (Birman et al., 2000). While our study acknowledges the potential benefits and challenges of professional development, the specific benefits and challenges mentioned may differ from those emphasized in prior research. The focus may be on particular aspects, such as teacher motivation, student achievement, or program scalability, depending on the research context and objectives. The benefits and challenges associated with professional development can be influenced by contextual factors, such as the education system, school culture, and regional policies. Findings from our study may reflect the unique conditions of the specific educational context under investigation, making direct comparisons with other challenging studies.

Conclusion

It was concluded from the finding that In-service training plays a crucial role in enhancing the skills and knowledge of teachers, enabling them to provide quality education to their students. The satisfaction level of teachers regarding in-service training is an important factor that can impact

their performance and overall motivation. In the district of Narowal, secondary school teachers have been actively participating in various in-service training programs to improve their teaching methodologies and update their subject knowledge. Understanding the satisfaction level of these teachers regarding the effectiveness and relevance of this training is essential for the education authorities to make informed decisions and implement necessary changes if required. In conclusion, assessing teacher satisfaction levels regarding in-service training at secondary schools in district Narowal is crucial for enhancing teacher performance and motivation. Through evaluating various parameters such as content and structure, impact on professional growth, support and resources provided, and organization and management, education authorities can gather valuable feedback to improve future training programs. By addressing any concerns or issues raised by teachers, education authorities can ensure that in-service training programs are effective and relevant, and contribute to enhancing overall teacher satisfaction levels.

Some individuals received a relatively low amount of training, while the maximum value indicates that there were individuals who received a higher level of training. There was a moderate amount of variability in the amount of in-service training received by individuals in the sample. This could be due to a range of factors, such as differences in job roles, access to training opportunities, or individual preferences. The effect of in-service training on teaching professionals at secondary schools in district Narowal is an important topic worth exploring. By understanding the potential benefits and challenges associated with this form of professional development, we can work towards improving the quality of education provided to students. In-service training has the potential to enhance teachers' pedagogical knowledge and skills, increase job satisfaction and motivation, and foster a sense of community among teaching professionals. However, it is crucial to address the challenges that may arise, such as limited resources and time constraints, to ensure that in-service training is effective and impactful for all teaching professionals in the district. In-service training is essential for keeping teachers abreast of the most recent developments in instructional strategies, technology integration, and educational research. As a result, educators gain greater competence and self-assurance in their positions, enabling them to successfully handle the difficulties and complexities of the modern classroom. Furthermore, these training programs promote a continuous learning environment where teachers are inspired to evaluate their methods and constantly attempt to get better. Beyond just the individual teachers, in-service training has a positive impact on the entire educational environment. Collaboration among educators is encouraged when teachers return to their classrooms with fresh knowledge and abilities, which results in the exchange of best practices and the creation of a cogent educational strategy. A richer and more interesting learning environment for students' results from teachers' professional development, which also benefits students' academic achievement and general development.

However, these programs must be carefully planned, well-structured, and in line with the unique requirements of the teachers and the school to fully realize the potential of in-service training. Effective in-service training programs must include sufficient resources, constant support, and

chances for implementation in actual classroom situations. In-service training is a potent instrument for developing teachers' professional abilities at the secondary level, to sum up. Educational institutions create the way for improved teaching strategies, increased student learning experiences, and eventually the improvement of education as a whole by investing in the continual development of educators.

References

- Almanthari, A., Maulina, S., & Bruce, S. (2020). Secondary School Mathematics Teachers' Views on E-Learning Implementation Barriers during the COVID-19 Pandemic: The Case of Indonesia. *Eurasia journal of mathematics, science and technology education*, 16(7).
- Altun, T. (2011). INSET (In-service Education and Training) and professional development of teachers: A comparison of British and Turkish cases. *Online Submission*.
- Amadi, M. N. (2013). In-Service Training and Professional Development of Teachers in Nigeria: Through Open and Distance Education. *Bulgarian Comparative Education Society*.
- Arthur Jr, W., Tubré, T., Paul, D. S., & Edens, P. S. (2003). Teaching effectiveness: The relationship between reaction and learning evaluation criteria. *Educational Psychology*, 23(3), 275-285.
- Ayvaz-Tuncel, Z., & Çobanoğlu, F. (2018). In-service teacher training: Problems of the teachers as learners. *International Journal of Instruction*.
- Birman, B. F., Desimone, L., Porter, A. C., & Garet, M. S. (2000). Designing professional development that works. *Educational leadership*, 57(8), 28-33.
- Bryk, A. S., Gomez, L. M., Grunow, A., & LeMahieu, P. G. (2015). *Learning to improve: How America's schools can get better at getting better*. Harvard Education Press.
- Creswell, J. W., & Creswell, J. D. (2017). *Research design: Qualitative, quantitative, and mixed methods approaches*. Sage publications.
- Darling-Hammond, L., Burns, D., Campbell, C., Goodwin, A. L., Hammerness, K., Low, E. L., ... & Zeichner, K. (2017). *Empowered educators: How high-performing systems shape teaching quality around the world*. John Wiley & Sons.
- Egert, F., Dederer, V., & Fukkink, R. G. (2020). The impact of in-service professional development on the quality of teacher-child interactions in early education and care: A meta-analysis. *Educational Research Review*, 29, 100309.
- Fukkink, R., Helmerhorst, K., Gevers Deynoot-Schaub, M., & Sluiter, R. (2019). Training interaction skills of pre-service ECEC teachers: Moving from in-service to pre-service professional development. *Early Childhood Education Journal*, 47, 497-507.
- Fullan, M. (Ed.). (2014). *Teacher development and educational change*. Routledge.
- Hansen-Thomas, H., Casey, P. P. J., & Grosso, L. (2013). Multiplying the effect of professional development: Teachers training teachers. *Tesol Journal*, 4(1), 129-150.
- Hattie, J. (2009). The black box of tertiary assessment: An impending revolution. *Tertiary assessment & higher education student outcomes: Policy, practice & research*, 259, 275.
- Hofstede, G. (2001). *Culture's consequences: Comparing values, behaviors, institutions and organizations across nations*. sage.
- Holton III, E. F., Bates, R. A., & Ruona, W. E. (2000). Development of a generalized learning transfer system inventory. *Human resource development quarterly*, 11(4), 333-360.
- Ingersoll, R. M., & Strong, M. (2011). The impact of induction and mentoring programs for beginning teachers: A critical review of the research. *Review of educational research*, 81(2), 201-

233.

- Klassen, R. M., & Chiu, M. M. (2011). The occupational commitment and intention to quit of practicing and pre-service teachers: Influence of self-efficacy, job stress, and teaching context. *Contemporary educational psychology, 36*(2), 114-129.
- Kyriacou, C., & Coulthard, M. (2000). Undergraduates' views of teaching as a career choice. *Journal of education for Teaching, 26*(2), 117-126.
- Lehiste, P. (2015). THE IMPACT OF A PROFESSIONAL DEVELOPMENT PROGRAM ON IN-SERVICE TEACHERS' TPACK: A STUDY FROM ESTONIA. *Problems of Education in the 21st Century, 66*(1), 18-28.
- Noe, R. A., Tews, M. J., & McConnell Dachner, A. (2010). Learner engagement: A new perspective for enhancing our understanding of learner motivation and workplace learning. *The Academy of Management Annals, 4*(1), 279-315.
- Nzarirwehi, J., & Atuhumuze, F. (2019). In-service teacher training and professional development of primary school teachers in Uganda. *LAFOR Journal of Education, 7*(1), 19-36.
- Olujuwon, T., & Omiyale, P. (2021). The impact of in-service training on teachers' professional development in Lagos State public secondary schools. *Educational Journal of Multidisciplinary Studies, 18*(1), 326-334.
- ONALAN, O., & GURSOY, E. (2020). EFL teachers' views and needs on in-service training as a part of professional development: A case study in Turkish context. *Bartın University Journal of Faculty of Education, 9*(2), 373-387.
- Qaisra, R., & Haider, S. Z. (2023). The Influence of In-Service Teachers Training Programs on the Professional Development of School Teachers. *Pakistan Journal of Humanities and Social Sciences, 11*(1), 507-516.
- Quilapio, M. P., & Callo, E. C. (2022). The Effect of In-Service Training Programs on the Professional Development of Public Elementary School Teachers. *The Effect of In-Service Training Programs on the Professional Development of Public Elementary School Teachers, 107*(1), 9-9.
- Singh, S. K. (2011). The role of staff development in the professional development of teachers: Implications for in-service training. *South African Journal of Higher Education, 25*(8), 1626-1638.
- Skaalvik, E. M., & Skaalvik, S. (2014). Teacher self-efficacy and perceived autonomy: Relations with teacher engagement, job satisfaction, and emotional exhaustion. *Psychological reports, 114*(1), 68-7