WORKLOAD, SELF-EFFICACY AND TEACHER EFFECTIVENESS AMONG SECONDARY LEVEL SCHOOL TEACHERS

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Dedicated to my parents

Mr. Gopal Kirtania

and

Smt. Fulmala Kirtania

CERTIFICATE

Certified that the thesis entitled **"Workload, Self-Efficacy and Teacher Effectiveness among Secondary Level School Teachers"**, submitted by me for the Degree of Doctor of Philosophy in Arts (Education) at Jadavpur University, is based upon my work carried out under the supervision of Dr. Lalit Lalitav Mohakud, Associate Professor, Department of Education, Jadavpur University, and Prof. Muktipada Sinha, Professor, Department of Education, Jadavpur University and that neither this thesis nor any part of it has been submitted before for any degree or diploma anywhere/elsewhere.

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Abbreviations Used

ANOVA:	Analysis of Variance
B.A.:	Bachelor of Arts
B.Com.:	Bachelor of Commerce
B.Ed.:	Bachelor of Education
B.P.Ed.:	Bachelor of Physical Education
B.Sc.:	Bachelor of Science
CBSE:	Central Board of Secondary Education
Co-Ed:	Co-educational
D.EI.Ed.:	Diploma in Elementary Education
df:	Degrees of Freedom
F:	ANOVA
ICT:	Information Communication Technology
ICSE:	Indian Certificate of Secondary Education
Km:	Kilometer
Ku:	Kurtosis
LSD:	Least Significant Difference
M.A.:	Master of Arts
M.Com.:	Master of Commerce
M.Ed.:	Master of Education
M.P.Ed.:	Master of Physical Education
M.Phil.:	Master of Philosophy
M.Sc.:	Master of Science
MS Excel:	Microsoft Office Excel
N:	Number
p:	Probability Value
PhD:	Doctor of Philosophy
r:	Multiple Correlation
RAC:	Research Advisory Committee
SD:	Standard Deviation
SE:	Self-Efficacy
SEM:	Standard Error of Mean
SET:	Self-Efficacy Theory
Sig.	Significance

Sk:	Skewness
SPSS:	Statistical Package for Social Science
Std. Error:	Standard Error
t:	t-statistics
TE:	Teacher Effectiveness
WB:	West Bengal
WBBSE:	West Bengal Board of Secondary Education
WBCHSE:	West Bengal Council of Higher Secondary Education
UDISE:	Unified District Information System for Education

Preface

This thesis is submitted to the Faculty of Arts, Jadavpur University for the degree of Doctor of Philosophy in Arts (Education). I have completed this study under the supervision of Dr. Lalit Lalitav Mohakud, Associate Professor in the Department of Education at Jadavpur University and Prof. Muktipada Sinha, Professor in the Department of Education at Jadavpur University. Submitting this thesis under their guidance is a great pleasure for me. Through this study, I have learnt a lot of fascinating new things, which I have incorporated into this thesis. I have tried to make this thesis appealing and straightforward to grasp.

I have included everything relevant and essential to know about the concerned field. I have made this research appealing and straightforward to grasp. This study intends to measure the levels of workload, self-efficacy (SE) and teacher effectiveness (TE) among secondary-level school teachers in West Bengal, and the effects of various demographic and professional factors on these variables. It also explored the association of workload, SE and TE among secondary-level school teachers. The entire thesis has six chapters (Chapters I to VI). Chapter I, entitled 'Introduction', I have discussed the concepts and theoretical perspectives of the study. I summarised the previous research in Chapter II, entitled 'Review of Related Literature'. Chapter III, entitled 'Problem Statement', I presented the rationale for conducting this study, introduced the research problem, specifically mentioned the research objectives and hypotheses, and mentioned the area where this study was delimited. Chapter IV, entitled 'Methodology of the Study', presents the research design, the study's locale, participants, variables under consideration, data collection and analysis methods, and ethical considerations. Chapter V, entitled 'Analysis and Interpretation of Data', presents the results and their interpretations. Finally, Chapter VI, entitled 'Major Findings and Conclusion', presents the major findings and their discussions, educational implications, limitations, and suggestions for further studies. To properly visualise data and illustrate theories and concepts, I have included pertinent figures and diagrams and attempted to explore great length on each issue. I hope that the fascinating new information that emerged from this study will benefit teachers and policy-makers in the field of education and other related fields.

Prahlad Kirtania
(Research Scholar)

Abstract

Teachers play a crucial role in shaping students' academic and personal development. Their teacher effectiveness in the classroom is influenced by various factors, including workload and self-efficacy. The main objective of the present study was to measure the prevalence rate of workload, self-efficacy, and teacher effectiveness among secondary-level school teachers. It also investigates the influence of demographic factors (age, gender, present residence, marital status, locality of schools, board of schools, category of schools and medium of instruction) and professional factors (highest educational qualification, stream of education, teaching experience, ICT orientation and any other professional course) on workload, self-efficacy, and teacher effectiveness among secondary-level school teachers. This study also determines the mediating effects of self-efficacy in the relationship between workload and teacher effectiveness among secondary-level school teachers. For this study, the researcher followed a quantitative, descriptive approach with a cross-sectional design. The study included randomly selected 644 secondary-level school teachers from North 24 Parganas, South 24 Parganas, Kolkata, Howrah, and Hooghly districts in West Bengal, India. To collect data from the participants, the researcher administered a self-developed demographic and professional information sheet, the 'Self-efficacy Scale' developed by Singh and Narayia (2014), and the 'Teacher Effectiveness Scale' developed by Gandhi (2020). The collected data were analysed through descriptive statistics like- mean and S.D. and parametric statistical techniques like- Pearson correlation, t-test, one-way analysis of variance, and regression analysis in SPSS.

Results of the study revealed that most of the secondary-level school teachers have average workloads. The study revealed significant variations in workload among secondary-level school teachers concerning their gender, age, marital status, board of schools, medium of instruction, and stream of education, while present residence, locality of schools, category of schools, highest educational qualification, teaching experience, ICT orientation and professional courses showed no significant variations. This study also revealed that most of the secondary-level school teachers possess an average level of self-efficacy, which is significantly influenced by their present residence, marital status, locality of schools, board of schools, category of schools, medium of instruction, highest educational qualification, stream of education and ICT orientation but not by gender, age, marital status, teaching experience, board of schools and professional course.

Furthermore, the result revealed that most of the secondary-level school teachers demonstrated average teacher effectiveness. Demographic and professional factors such as gender, age, highest educational qualification, stream of education, teaching experience and professional course do not significantly influence teacher effectiveness. Still, variations exist based on present residence, marital status, locality of schools, board of schools, category of schools, medium of instruction and ICT orientation. Concerning the relationship between workload, self-efficacy and teacher effectiveness, the results revealed a low negative and insignificant relationship between workload and self-efficacy, workload and teacher effectiveness. The results also showed a low positive and significant relationship between overall self-efficacy and overall teacher effectiveness among secondary-level school teachers. The results also revealed that workload does not significantly affect SE and TE. While SE significantly effected TE, Workload had no indirect effect on teacher effectiveness. Finally, it was concluded that SE does not significantly mediate the relationship between workload and TE among secondary-level school teachers.

CHAPTER-I

INTRODUCTION

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INTRODUCTION

1.1.0. Introduction

Secondary education is vital in shaping students' academic, personal, and professional development at the school level. It connects primary and higher education, equipping learners with essential knowledge and skills. It lays the foundation for career goals, guiding students in exploring various fields and making knowledgeable selections for their future (Jain & Prasad, 2018). Teachers are significant in addressing learners' various needs at this stage. They are crucial in influencing students' intellectual and psychological growth where learners change from foundational education to specialised subjects and career-oriented pathways. In this stage, teachers' roles have become more complex and demanding, especially at this level, as they juggle instructional duties, administrative responsibilities, and the varied needs of adolescent students. However, several psychological and professional factors significantly affect the effectiveness of teachers (Bardach et al., 2022). For instance, a heavy workload, often characterised by extensive teaching hours, administrative responsibilities, and extracurricular duties, can lead to stress and burnout, ultimately affecting teacher performance and student outcomes (Magtalas & Eduvala, 2024). Conversely, the belief in one's ability to teach well and handle classroom difficulties, known as self-efficacy, is recognised as a crucial factor prompting teacher motivation, resilience, and the quality of instruction. In this context, teacher effectiveness is shaped by teachers' personal and professional factors, evaluated through student outcomes and classroom management, which are crucial for enhancing teacher well-being and educational outcomes (Bardach et al., 2022).

Teachers' workload and self-efficacy are critical factors affecting teacher effectiveness and performance and enhancing learning outcomes. They often balance various responsibilities through self-efficacy, as reducing excessive workload can lead to stress, burnout, and diminished productivity, negatively affecting teaching and learning quality. Research indicates that maintaining a balanced workload is essential for sustaining teacher motivation and engagement in their roles (Magtalas & Eduvala, 2024). Simultaneously, teachers can improve their effectiveness in the classroom when they have manageable workloads that foster focus, creativity, and participation. In this context, self-efficacy plays a significant role in managing workloads, essential for teacher effectiveness at the secondary school level. Teachers with high self-efficacy are more likely to utilise creative teaching and learning strategies, remain resilient when faced with

challenges, and foster strong connections with their students. Moreover, research has consistently demonstrated that self-efficacy enhances job performance and improves teachers' effectiveness and emotional well-being, creating a positive classroom environment.

The interplay between workload, self-efficacy, and teacher effectiveness is critical in determining the quality of education at the secondary level. A high workload with lesson planning, grading, admin tasks, and extracurriculars can cause stress, fatigue, and burnout, reducing teacher effectiveness (Bardach et al., 2022). However, teachers with strong self-efficacy and confidence in managing classroom challenges can better handle heavy workloads and maintain teaching standards. When teachers possess high self-efficacy, they demonstrate greater resilience, implement innovative teaching methods, and cultivate a positive learning environment, which boosts their effectiveness. In contrast, an overwhelming workload without sufficient support can undermine self-efficacy, resulting in decreased motivation, inferior instructional quality, and poorer student outcomes. Thus, maintaining a balanced workload and employing strategies to boost teachers' self-efficacy is crucial for achieving optimal performance and ensuring student success in secondary schools.

This chapter aims to discuss the concept, significance, and theoretical perspective of workload, self-efficacy, and teacher effectiveness among secondary-level school teachers. By identifying the factors that influence teachers' ability to perform effectively, this research seeks to contribute to developing strategies that promote a sustainable and empowering teaching environment.

1.1.1. Secondary School Education and Teachers' Role

Secondary education denotes the phase of schooling that succeeds primary education and precedes tertiary or higher education. Depending on a country's educational system, it typically encompasses students aged 11 to 18. In India, secondary education is generally divided into lower secondary (grades 9 and 10) and higher secondary (grades 11 and 12) (Jain & Prasad, 2018). This stage aims to equip students with foundational knowledge, critical thinking skills, and specialized subject learning that prepares them for higher education or vocational careers (UNESCO, 2017). Secondary education is critical in shaping students' future career paths by offering a diverse curriculum that includes the humanities, sciences, and vocational subjects. It also nurtures personal development, social responsibility, and cognitive skills essential for lifelong learning (World Bank, 2021). This stage forms a foundation for skill development, employment opportunities,

and nation-building. According to the National Education Policy (NEP) 2020, secondary education is vital for equipping students with critical thinking, problem-solving abilities, and digital proficiency, which are crucial for the 21st-century workforce (Ministry of Education, 2020). Moreover, secondary education fosters social mobility and reduces disparities by providing equitable learning opportunities, particularly for marginalised communities (Tilak, 2018). Expanding secondary education further contributes to the country's economic growth by enhancing the productivity and employability of young individuals (Kingdon, 2020).

Teachers are crucial in secondary education, influencing students' academic success, personal growth, and career aspirations. They impart knowledge, mentor students, and model critical thinking, self-confidence, and social responsibility (Darling-Hammond, 2000). Effective teachers employ innovative techniques, encourage active learning, and tailor strategies to diverse needs (Shulman, 1986). They foster an inclusive environment by enhancing students' emotional well-being (Hattie, 2009). Furthermore, secondary teachers equip students for higher education and the workforce with the necessary knowledge and life skills (Good & Brophy, 2003). Their impact transcends academics; they shape future citizens and contribute to national development. However, teachers' role significantly influences student outcomes through workload management, self-efficacy, and effectiveness. Secondary school teachers frequently juggle lesson planning, grading, administrative duties, and extracurricular activities, which can hinder their ability to provide effective instruction (Klassen & Chiu, 2010; Bandura, 1997). A heavy workload may contribute to stress and burnout, potentially reducing teacher effectiveness (Skaalvik & Skaalvik, 2017). In contrast, teachers with high self-efficacy—confidence in their capability to succeed in specific contexts—often demonstrate increased resilience and adaptability, enabling them to tackle challenges more effectively (Tschannen-Moran & Hoy, 2001). Teacher effectiveness, defined by student engagement, promotion of critical thinking, and attainment of educational goals, is closely associated with self-efficacy and effective workload management (Hattie, 2009). Skilled teachers frequently utilise strategies to balance their duties, uphold high self-efficacy, and foster positive learning environments, consequently boosting student achievement. Thus, it is vital to assist teachers in managing their workloads and enhancing their self-efficacy to maintain teacher effectiveness and improve educational outcomes.

1.2.0. Workload of Secondary-Level School Teachers

Workload refers to a teacher's responsibilities at a specific time within a school. It is a key component for educators, representing the volume of work they are expected to complete within a particular period, and it significantly influences their intentions to leave (Chirimi, 2016; Anees et al., 2021; Shah et al., 2024). It encompasses a wide range of activities, with urgent responsibilities, critical job requirements, and challenges arising from disruptions (Masta & Riyanto, 2020; Shah et al., 2024). The workload assigned to teachers can vary, and their ability to manage it effectively at any given time relies on their skills (Njuguna et al., 2022). It can be understood from two distinct perspectives: quantitative and qualitative. Qualitative workload pertains to the physical and intellectual duties associated with a job, whereas quantitative workload denotes the volume of work an employee accomplishes within a designated time frame (Spector, 2001, as cited in Gull & Akhtar, 2019).

Teacher workload is becoming increasingly significant globally (Njuguna et al., 2022), presenting a major challenge that impacts job design and educator morale (Rasheed et al., 2016). It includes instructional and non-instructional responsibilities (Shafie et al., 2017; Njuguna et al., 2022). Teaching responsibilities like lesson preparation and administrative duties (Van-Droogenbroeck et al., 2014). It can be narrowly defined as teaching hours or broadly as all professional obligations in a timeframe (Gull & Akhtar, 2019). Sumra (2005) highlights that teacher shortages exacerbate workload challenges by increasing the individual responsibilities of existing staff. This heightened workload has been shown to negatively affect teacher effectiveness, commitment, and job satisfaction (Lassa, 2009; Mosha, 2004; Nuwaha et al., 2023). Furthermore, excessive workloads diminish the professional effort teachers can dedicate to their roles, ultimately compromising the quality of education (Easthope & Easthope, 2000). Workload imbalances contribute to demotivation, depression, and inefficiency among teachers (Orjiji, 2000; Amalu, 2014).

The diverse nature of educational demands contributes to the complexity of the workload, which impacts teacher well-being and effectiveness (Fishbein et al., 2020). At the same time, efficient workload management enhances student outcomes and teacher performance (Shah et al., 2024). Excessive workload negatively affects well-being and teacher effectiveness (Barrios et al., 2023). The workload includes teaching, administrative tasks, and extracurricular responsibilities, which impact teaching performance, such as instructional quality, and it also impacts administrative tasks and ICT use, hindering effectiveness (Rahman & Avan, 2016; Barrios et al., 2023). It also

influences the self-efficacy and job satisfaction among secondary-level school teachers. Excessive responsibilities can impede goal achievement, diminish confidence, and increase job insecurity (Belizario et al., 2024). It is a complex issue that affects teachers' well-being, job satisfaction, and performance. An excessive workload—whether instructional or non-instructional—can lead to stress, burnout, and diminished motivation, ultimately compromising educational quality and teacher retention. Effective workload management enhances teacher efficacy and student outcomes while fostering a sustainable educational environment. Addressing these challenges needs an inclusive consideration of the pressures educators encounter to promote a healthier and more efficient workforce.

1.2.1. Factors Affecting Workload of Secondary-Level School Teachers

Several factors, including institutional requirements and external pressures, shape secondary school teachers' workloads. These influences can significantly affect teachers' effectiveness and overall job satisfaction. The following are the primary factors that affect the workloads of secondary school teachers:

1. Institutional Factors

- *Class Size and Student Diversity:* Larger classes and varying student needs, such as learning disabilities and language differences, heighten the time and effort needed for lesson planning, personalised instruction, and assessments (Hattie, 2009; Tomlinson, 2014).
- *Administrative Tasks:* A surplus of paperwork, reporting, and adherence to school policies adds to the workload and frequently takes time away from teaching (Easthope & Easthope, 2000).
- *Extracurricular Responsibilities:* Teachers are often tasked with supervising extracurricular activities like sports, clubs, and events, which prolongs their working hours (Sumra, 2005).

2. Curriculum and Assessment Demands

- *Curriculum Complexity:* A strict and overwhelming curriculum may extend preparation time and raise the pressure to address every necessary topic, limiting opportunities for flexibility or creativity (Ball, 2003).
- *Standardized Testing:* The focus on standardised testing and accountability frequently results in extra burdens, such as preparing for tests, grading, and analysing data (Darling-Hammond, 2000).

3. External Factors

- *Policy Changes:* Teachers must constantly adjust to rapid educational policies and curriculum shifts, frequently with insufficient training or resources (Leithwood et al., 2008).
- *Socioeconomic Context:* Educators in underprivileged regions often encounter extra obstacles, including insufficient parental involvement and student behaviour problems, resulting in an increased workload (Sirin, 2005).

4. Personal and Professional Factors

- *Professional Development:* Although crucial for development, participating in workshops and training sessions can increase the workload, mainly if they occur outside of standard working hours (Day et al., 2006).
- *Work-Life Balance:* Struggling to balance work duties with personal life may cause stress and burnout, which can intensify workload issues (Skaalvik & Skaalvik, 2017).

5. Resource Availability

- *Lack of Resources:* Limited teaching materials, old technology, and poor classroom facilities can raise the time and effort needed for effective instruction delivery (Mosha, 2004).
- *Support Staff Shortages:* The absence of administrative or teaching assistants compels teachers to assume extra responsibilities, including clerical tasks or supervising students (Lassa, 2009).

Addressing these challenges requires systemic changes, such as reducing administrative tasks, providing sufficient resources, and ensuring professional support. Easing these pressures can enhance teacher well-being and effectiveness, positively impacting student outcomes.

1.3.0. Self-Efficacy of Secondary-Level School Teachers

Self-efficacy (SE) denotes to an individual's confidence in successfully achieving specific goals (Liu et al., 2023). It is a dynamic component influenced by other mechanisms, such as performance and objectives (Erel, 2000). It has been shown to immediately affect performance, which is connected to a person's overall capabilities (Song, 2022). SE signifies the belief in an individual's capability to plan and execute the actions required to achieve specific results (Ibanga, 2021; Bandura, 2006; Jagadianti & Wijayanti, 2024). It embodies a fundamental conviction regarding one's capacity to

manage personal functioning and influence the events that shape daily experiences (Erel, 2000). It is vital for understanding an individual's behaviour, emotions, and responses to stress (Downes et al., 2017; Han & Wang, 2021). It also mediates the relationship between skills and actions, impacting individuals' emotions, cognition, motivation, and behaviour. It encompasses a general belief in one's abilities, a more nuanced concept. In the educational context, SE refers to the conviction and assurance of one's talents and worth (Ramakrishnan & Salleh, 2018). Teachers with high levels of SE often employ effective teaching techniques, enhancing student engagement and academic achievement (Ipek et al., 2018). Teachers' SE is defined as specific teachers' beliefs regarding their capability to strategy, organise, and execute activities necessary to achieve specific educational objectives (Skaalvik & Skaalvik, 2014). Teachers need to meet their goals, manage tasks efficiently, and confidently tackle instructional challenges (Erel, 2000), which offer a detailed account or explanation.

Bandura (2000) identified SE as a link between cognition and behaviour, correlating with the energy and effort expended in achieving specific outcomes. A person's effectiveness beliefs are based on various information sources that may be communicated both directly via experience and through social judgment (Roberts, 2021). Initially, it denotes a person's belief in their ability to perform the necessary duties to attain objectives (Bandura, 1986). Secondly, a primary objective of SE is to enhance individual capabilities for effectively managing diverse adverse or stressful situations (Jerusalem & Schwarzer, 1992). Third, it fosters motivation, cognitive resources, and SE in controlling life events (Wood & Bandura, 1989). The characteristics of SE beliefs indicate that this construct has significant potential to enhance teacher development initiatives (Clark & Bates, 2003). When teachers have a better sense of SE, they are more excited about trying out new ways to teach, exhibit enhanced planning and organisational skills, utilise innovative approaches, and set ambitious goals (Aldridge & Fraser, 2016). SE encompasses developing and maintaining SE beliefs, their sources and impacts, the mechanisms these beliefs operate, and strategies for their enhancement (Paschal & Srivastava, 2021). Falki (2019) outlines key aspects of SE that help to understand the nature of SE:

- SE affects individuals' life decisions and behaviours, enabling them to steer clear of tasks they lack confidence in.
- The impact on a person's motivation is significant; individuals with high SE exert tremendous effort in task performance than those with low SE.

- A person's perception of a task is altered such that an individual with high SE views it as manageable and achievable. A person with low SE views the same task as complex and tends to avoid it.
- SE enables individuals to recognise their capacity to influence their actions and lives despite the perception that many aspects are beyond their control.
- It enables individuals to confidently manage negative or stressful situations rather than anxiety and fear.

Furthermore, Bandura (1977) classified SE into three primary domains: strength, magnitude, and generality. In the three areas, four factors affected instructors' perceptions of their competencies and self-concept: mastery experiences, vicarious experiences, verbal persuasion, and social-emotional states. Three dimensions of SE that can be measured are: (1) magnitude, which refers to the perceived difficulty of attainable tasks; (2) strength, indicating the conviction level regarding the magnitude; and (3) generality, which assesses the likelihood of expectations being generalised across various situations (GIST, 1987).

1.3.1. Factors Affecting Self-Efficacy of Secondary-Level School Teachers

Gardner and Pierce (1998) identified two elements to describe SE: a) the recurring success in completing a specific task and b) the accumulation of successful experiences across various activities. They also posited that individuals are more likely to experience positive outcomes in different situations if they possess a higher overall level of SE. Bandura (1997) identified four primary sources of information that influence self-efficacy: mastery experiences, physiological arousal, vicarious experiences, and verbal persuasion. Among these, mastery experiences are the most effective factor in enhancing SE, but each of these four factors influences SE.

1. **Mastery Experience:** Bandura (1987) emphasised that mastery experiences are the primary source of information, carries substantial implications for the self-enhancement paradigm of academic achievement. This model posits that improving students' beliefs about their self-worth or competence is crucial for enhancing their academic performance. Typically, this is achieved through programmes focused on boosting self-beliefs via verbal persuasion. Mastery experience is the key determinant of an individual's SE. Success increases SE, while failure reduces it. It is characterised by the individual's perception of achievement or its absence. Completing a task boosts self-efficacy, whereas failing to manage it can diminish and undermine it. Bandura (1994) asserts that successful task performance enhances an

individual's sense of SE while failing to perform a task reduces it (Falki, 2019). This approach is the most effective for fostering individuals' robust sense of self-efficacy (Bandura, 1994).

2. **Physiological Factors:** In unusual, stressful circumstances, individuals often exhibit signs of distress, such as tremors, discomfort, fatigue, anxiety, and nausea. The perception of these responses can significantly influence a person's SE. Consider a scenario in which someone experiences 'butterflies in the stomach' before public speaking. Those with low SE may interpret this as a sign of inadequacy, further lowering SE. Conversely, individuals with high SE tend to view these physiological signs as normal and not indicative of their capabilities. Thus, a person's belief in the significance of their physiological response affects their SE more than the response itself. Their mood, physical and mental reactions, and stress levels are connected to their abilities and competencies within a specific context (Falki, 2019). This illustrates an individual's emotional and physical reactions to specific circumstances (Bandura, 1982, 1986), highlighting feelings of calmness and apprehension in stressful situations alongside the appropriate coping strategies the individual employs as necessary.
3. **Vicarious Experience:** It is the consequence arising from the activities of others. This source of knowledge is less robust than the analysed outcomes of mastery experiences, which become more responsive to the trajectory and course of life. Part of a vicarious experience also involves the social comparisons made by other individuals. These comparisons and peer modelling can influence developing self-perceptions of competence. Vicarious experience means that when a person observes another individual accomplishing a task, their SE is strengthened, as they realise that if others can do it, they can too (Falki, 2019). According to Bandura (1994), a person's confidence and SE develop from witnessing others succeed through persistent effort. Consequently, they come to understand that they, too, can master similar activities to achieve success in any task.
4. **Social persuasions**: Social persuasions relate to incentives and disincentives. Such remarks can have a significant effect; many individuals recall instances where statements profoundly influenced their self-confidence. Positive persuasions enhance SE, while negative persuasions diminish it. Undermining an individual's SE is often more straightforward than bolstering it. It is typically easier to diminish SE beliefs through negative evaluations than to improve them via positive reinforcement

(Bandura, 1987). This involves words of encouragement or discouragement from others regarding the successful completion of a task (Falki, 2019).

However, Gibbs (2000) identifies four key factors of self-efficacy: Behavioural SE pertains to an individual's capacity to execute particular actions and navigate particular situations. Cognitive SE pertains to teachers' confidence in managing their thoughts in specific teaching scenarios. Emotional Self-efficacy involves a teacher's ability to regulate their emotions during various teaching contexts. Cultural SE denotes a teacher's competence in executing actions in culturally appropriate manners within specific teaching situations. Therefore, the primary aim of teacher education is to facilitate mutual understanding between students and teachers, promote SE, and encourage the sharing of knowledge and skills regarding effective teaching practices.

1.4.0. Teacher Effectiveness of Secondary-Level School Teachers

Teacher effectiveness plays an important role in determining the quality of education, as they are regarded as the focal point of the teaching and learning process. It refers to measuring a teacher's success in fulfilling official and other specified duties required by the nature of their situation (Gandhi, 2020). Collecting teachers' characteristics, capabilities, and behaviours at all educational stages enables students to achieve desired outcomes (Hunt, 2009). It comprises two familiar terms: 'teacher' refers to an individual who imparts knowledge or skills to learners, and 'effectiveness' indicates the extent to which an agent creates the intended outcomes (Remmers, 1952). TE encompasses proficiency in instructional strategies, student and classroom management, interpersonal relations, and personal and professional skills (Gandhi, 2020). TE denotes the interplay among scholars' physical, intellectual, and psychological interests, the lecturers' content proficiency, and social requirements (Hepsibha & Catherine, 2022). However, assessing and measuring the success or failure of teachers can be challenging. Garrett and Steinberg (2015) defined teacher effectiveness as the attribute of a teacher capable or potential of positively impacting student learning, behaviour, and attitudes. The effectiveness of teaching is demonstrated through a comprehensive understanding of the subject matter, practical classroom presentation skills, and the ability to create an engaging atmosphere for teaching and learning. The effectiveness of educational institutions depends on their teaching style, organisational structure, classroom management, relationships between teachers and students, learning environment, and assessment methodology (Barkat, 2021). It conveys the notion of perfection or the

optimal level of efficiency and productivity for teachers (Bhullar, 2019). An effective teacher cultivates the development of fundamental abilities, comprehension, appropriate work habits, positive attitudes, value judgements, and suitable personal adjustment in students (Biswas, 2017). An effective teacher not only conveys the entire educational curriculum assigned to them excellently and efficiently but also ensures the optimal development of the students (Borkar, 2013).

TE integrates cognitive and non-cognitive traits such as academic qualifications and distinctions, clarity of thought and expression, fluency, teaching strategies, charisma, experience, and socio-personal interactions. Gupta (1976) defined the term TE as a collection of competencies demonstrated by a teacher in instructional methodologies, classroom management, personal disposition, temperament and inclinations, assessment and feedback, interpersonal relationships, job engagement, creativity and enthusiasm, professional ethics, and innovation within a typical teaching-learning context. It is the amalgamation of teacher competency and performance in achieving educational objectives.

1.4.1. Dimensions of Teacher Effectiveness of Secondary-Level School Teachers

Teacher effectiveness (TE) has several dimensions identified by various researchers. Different aspects contribute to teacher effectiveness. According to Gandhi (2020), teacher effectiveness comprises six dimensions.

1. *Personal Qualities:* It pertains to the attributes of an educator characterised by empathy, creativity, energy, emotional intelligence, and the ability to maintain healthy relationships with students.
2. *Instructional Planning and Implementation:* Educators' capacity to design instruction, promote students' advanced cognitive skills and higher-order thinking, and utilise diverse assessment strategies to engage learners in the classroom actively.
3. *Classroom Organisation and Management:* A teacher's capacity to effectively organise and manage classroom resources and interactions is essential for evaluating student actions and delivering constructive feedback. This approach fosters a positive classroom environment that enhances learning opportunities and motivation.
4. *Interpersonal Relations:* A teacher's capacity to sustain positive relationships with colleagues, students, and community members.
5. *Professional Skills:* The micro-behaviors of a teacher establish clear expectations and parameters, thereby offering essential support to students within the classroom environment.

6. *Digital Skills:* Educators' proficiency in information communication technologies, techno-pedagogy, and the capability to utilise and manage diverse, innovative digital tools in the teaching-learning process.

1.4.2. Factors Affecting Teacher Effectiveness of Secondary-Level School Teachers

Teacher effectiveness is a vital factor in student achievement and the overall quality of education, shaped by various influences. Here is an overview of the primary factors impacting teacher effectiveness:

1. **Teacher's knowledge:** A teacher's effectiveness is contingent upon their knowledge. An expert teacher in their subject matter will demonstrate high effectiveness. The educator exerts considerable effort to elucidate various topics for students and employs diverse techniques to actively engage them in the teaching and learning process.
2. **Teacher's experience:** The experience of teachers significantly influences their effectiveness. An experienced teacher typically demonstrates mastery of their subject, contributing to their effectiveness in the classroom. Increased experience correlates with enhanced effectiveness.
3. **Love for his duty:** A commitment to one's responsibilities is essential for success in any profession. Teachers' affection for students, colleagues, and the organisation enhances their effectiveness.
4. **Intelligence:** Intelligence contributes to the effectiveness of teachers. He or she can simplify complex topics through intelligence. He/she uses cognitive abilities to employ resources in teaching-learning effectively.
5. **Satisfaction:** Satisfaction is a significant factor in assessing teacher effectiveness. A teacher's job satisfaction and fulfilment in family and societal roles positively influence the effectiveness of their teaching.
6. **School Climate:** School climate states to the total atmosphere of the educational institution. School climate is essential for enhancing teacher effectiveness. In a favourable climate, teachers experience increased freedom and happiness. The support of colleagues and the principal contributes significantly to teacher effectiveness.
7. **Availability of Resources:** The availability of resources enhances teacher effectiveness. Various techniques, including computers, projectors, blackboards, and whiteboards, enhance teaching effectiveness. These techniques enhance student engagement and interest in the educational process.

8. **Teacher's personality:** The personality of a teacher encompasses their qualities, behaviours, and characteristics. The behaviour and body language of the instructor directly influences student performance. A teacher's helpfulness, diligence, and determination towards goals can influence students to adopt similar traits.

1.5.0. Theoretical Perspectives

Theoretical perspectives describe the existing theories of workload, self-efficacy and teacher effectiveness that contribute to the present study. The following theories of Bandura, Hay McBer, Nitsaisook and Postleth, Campbell et al., Medley, Cheng and Tsui and Robert Marzano significantly contribute to the present study. A brief explanation of the importance of these theories is presented in the following section.

1.5.1. Theoretical Perspectives of Self-Efficacy

Bandura's Theory of Self-Efficacy

The Self-Efficacy Theory (SET), rooted in Bandura's (1986) social cognitive theory, provides the theoretical framework for this research. This theory asserts that perceived self-efficacy and outcome expectations are the primary variables that significantly influence behaviour (Bandura, 1986; Schunk & DiBenedetto, 2021). The latter construct addresses the perceived benefits and drawbacks of participating in the behaviour (Schunk & DiBenedetto, 2021). SET posits that individuals typically engage in activities they believe they can succeed in while ducking those they witness as likely to fail. Despite the task's surface trouble, people with a strong sense of efficacy are sure they can win (Bandura, 1994). Consequently, these individuals consider these challenges hurdles to surmount instead of evading dangers. In contrast, individuals lacking confidence in their ability to accept challenging tasks view them as threats. Accordingly, individuals tend to evade these challenges due to personal deficits hindering their success (Bandura, 1994). So, individuals often restrain their efforts when confronted with difficulties or obstacles, resulting in diminished self-efficacy (Bandura, 1994, 1997). SET presents the idea that somatic and emotional states, verbal persuasion, vicarious experiences, and mastery experiences can change how effective someone thinks they are (Bandura, 1994, 1997; Pajares, 2002).

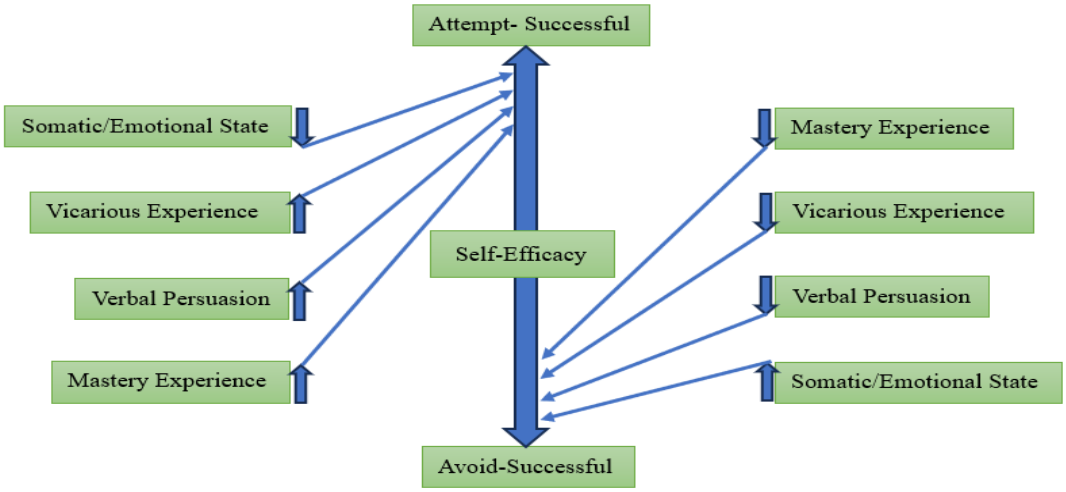

Figure 1.1. Bandura's Self-Efficacy Theory (Bandura, 1994)

1.5.2. Theoretical Perspectives of Teacher Effectiveness

HAY McBer Model of Teacher Effectiveness (2000)

The consulting firm Hay McBer researched teacher effectiveness for the Department of Education and Skills (DIEE 2000). McBer concluded that age, experience, qualifications, and background variables do not predict teacher effectiveness. Competent educators are found across various educational institutions and possess diverse backgrounds. The Hay McBer model delineates three interrelated components of effective teaching that facilitate student progress. The following are included.

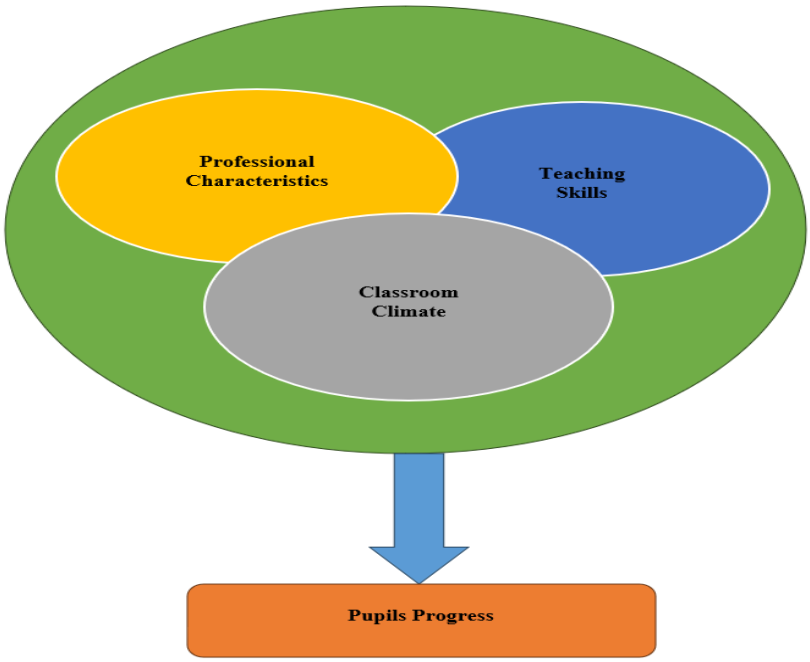

Figure 1.2. HAY McBer Model of Teacher Effectiveness (2000)

- **Professional characteristics**: Consider the teacher's capability to establish expectations, think conceptually, lead, think conceptually and analytically, and be professional.
- **Classroom climate**: Interviews with students gauge how they feel about the classroom's overall comfort, safety, interest, and appeal, the clarity of the lessons, behavioural standards, orderly environment, teacher fairness, opportunities for participation, and emotional support.
- **Teaching skills:** High standards, time management, strategic planning, various teaching techniques, classroom and behavioural control, practical use of assignments, and assessment are all teaching competencies.

The three elements differ in nature. Professional attributes and pedagogical competencies are pertinent to the qualities that a teacher contributes to the profession. Professional qualities refer to the enduring behavioural tendencies that collectively shape the discussions undertaken by educators. Teaching skills include the behaviours that a proficient educator consistently exhibits in the classroom. The classroom climate serves as an evaluative metric that allows educators to understand students' emotions and the learning environment they create, which impacts students' motivation to learn.

Nitsaisook and Postleth Model of Teacher Effectiveness (1986)

Nitsaisook and Postleth (1986) introduced the process products paradigm, a widely acknowledged framework, as depicted in figure 1.3. This is known as the presage-content-process-product model some times.

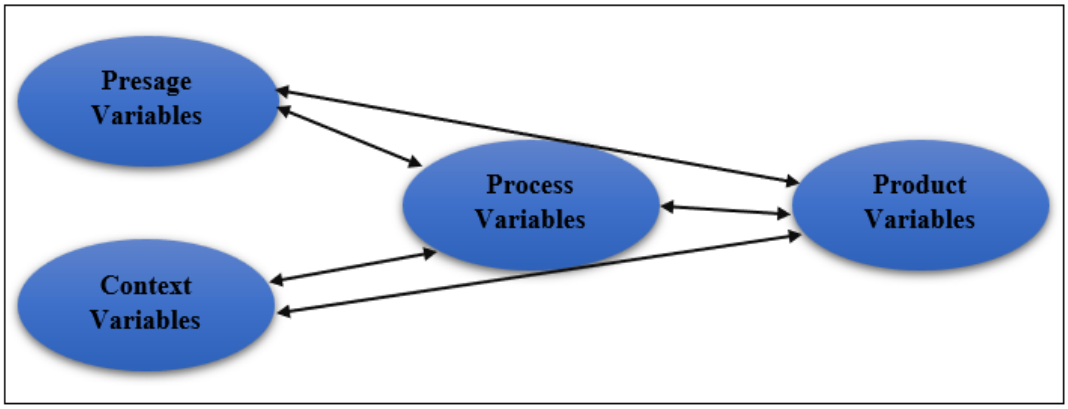

Figure 1.3. Nitsaisook and Postleth Model of Teacher (1986)

In the presage-context-process-product model, factors that describe the presage typically include teacher characteristics such as age, gender, training, verbal aptitude, years of

experience, topic knowledge, teacher education experience, educational values, and understood teaching theories. The learning environment comprises context factors like the type of school, grade level, subject, students' abilities and previous knowledge, class size, and school size, among others. Process factors have to do with how the classroom works, including teaching styles, methods, practices, and behaviours, as well as how the teacher interacts with the students. On the other hand, product variables describe how well students meet cognitive goals, what they believe in and how they act.

Differentiated Teacher Effectiveness Model by Campbell et al. (2004)

According to Campbell et al., teacher effectiveness is achieving socially valued objectives established for teachers' roles, particularly in helping student learning. This description includes four aspects: the varying contexts, circumstances, and conditions under which students are allowed to learn; the diversity among students; the differing degrees of achievement of learning goals; and the variability of principles and values that affect learning and effectiveness. Their objective was to change a favoured concept of effectiveness for these grounds. This indicates that teacher effectiveness includes a thought that exceeds standard measures, saying that teachers establish varying levels of effectiveness dependent on the students, subjects, contexts, and exact aspects of their professional responsibilities. The purpose of developing this Model by Campbell et al. (2004) was to establish concepts and methods that acknowledge the aforementioned differences. This Teacher Effectiveness model employs the term "differentiated" rather than "differential," as the latter pertains to variations in effectiveness within the same dimension. The model signifies effectiveness across various dimensions of teaching.

Based on the aforementioned definition, Campbell et al. (2004) identified five possible aspects of differential efficacy. These pertain to variations in role activities, variations in topics and/or subject components, variations in students' background elements, variations in students' personal qualities, and variations in cultural and organisational contexts. Figure 1.4. illustrates the Differential Teacher Effectiveness Model.

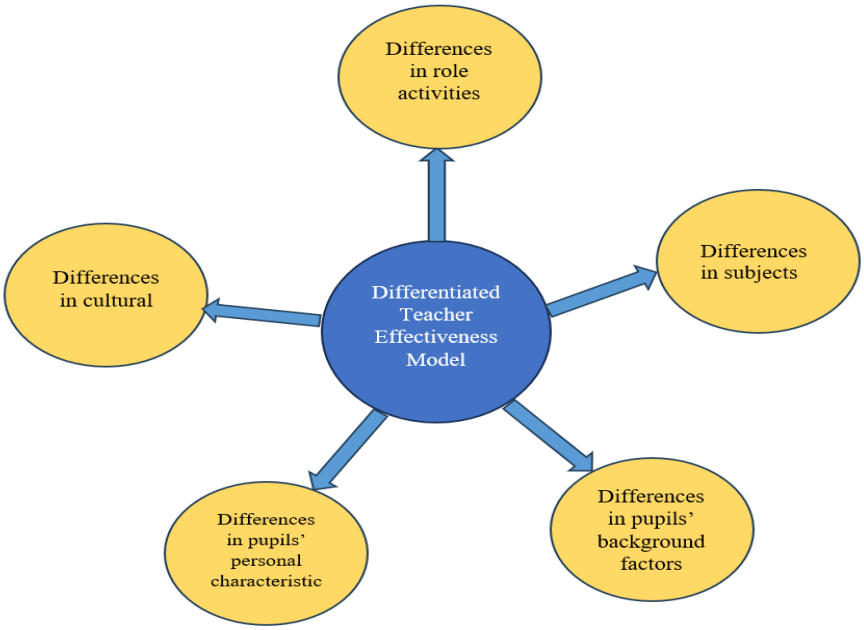

Figure 1.4. Campbell et al. Model of Differentiated Teacher Effectiveness (2004)

Medley's Structure of Teacher Effectiveness (1982)

The teacher Effectiveness model proposed by Medley (1982), as depicted in Figure 1.5, demonstrates the interrelationship among these criteria. The framework of teacher effectiveness he presents systematically outlines nine significant elements essential for defining teacher effectiveness. These serve as a foundation for future study, the research process, and teacher effectiveness decision-making.

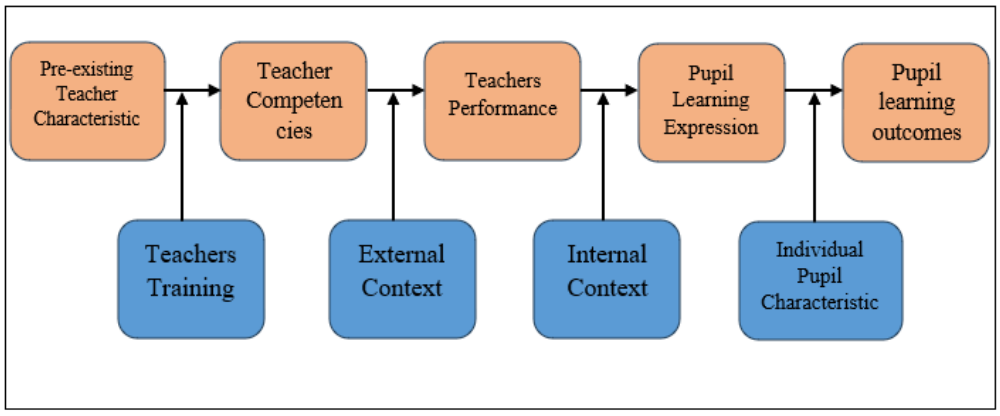

Figure 1.5. Medley's Structure of Teacher Effectiveness (1982)

- **Pre-existing Teacher Characteristics:** It pertains to the knowledge, beliefs, skills, and personal characteristics that educators possess at the onset of their professional training.

- **Teacher Competence:** It recognises the abilities, competencies, and knowledge the educator contributes to the classroom. The educator's persistent traits may remain unchanged despite alterations in circumstances.
- **Teacher Performance** refers to the teacher's conduct during instruction inside and outside the classroom. It is comprehended about the teacher's actual actions.
- **Pupils' Learning Experience** refers to the student's conduct during instruction. This is not a teacher trait; instead, it is contingent upon the instructor's performance.
- **Pupil Learning Outcome:** This may directly result from the student's learning experience. When an educator teaches, they strive to offer learning experiences and opportunities for the student, who is expected to achieve the designated learning objectives.
- **Teacher Training:** It demonstrates the efforts of teacher educators to improve a teacher's competency by expanding their repertoire of 18 distinct interests in pre-service training. The competencies a teacher trainee acquires upon completing pre-service training are a combination of innate teaching qualities and the knowledge, beliefs, and skills cultivated throughout the training period.
- **External Teaching Context:** These attributes of the school in which the teacher is employed influence teacher performance. This may encompass the school's physical infrastructure, media accessibility, equipment and resources, and the connection between the school and the community. The cell's factors dictate the impact of school staff on teacher efficacy.
- **Internal Teaching Context:** These aspects are characteristics of the class led by a teacher that affect the instructor's effectiveness in moulding students' learning experiences in that classroom. These criteria encompass class size, age group, ability, heterogeneity, and socio-economic characteristics.
- **Individual Pupil Characteristics:** The attributes of a child influence the learning outcomes derived from specific educational experiences. Two students would respond differently to the same educational experiences due to their varying abilities, interests, and values.

The Model of Levels of Teacher Effectiveness by Cheng and Tsui (1996)

Cheng and Tsui (1996) enhanced Medley's paradigm by incorporating two additional components: 1. Teacher Evaluation and 2. Professional Development. This is seen in figure 1.2. Cheng has offered three approaches for improving teacher effectiveness based

on the aforementioned methodology. These include (i) short-term strategy, (ii) long-term strategy, and (iii) dynamic strategy.

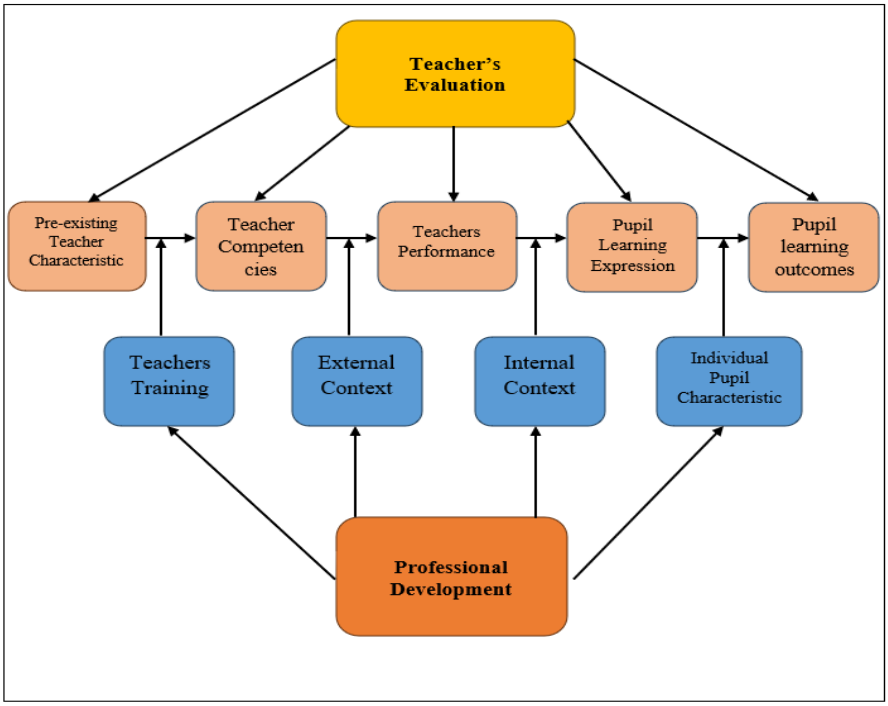

Figure 1.6. Cheng and Tsui's Model of Levels of Teacher Effectiveness (1996)

(i) **The Short-Term strategy:** This approach highlights observable teacher conduct alterations to the instructional setting. Teachers do not choose their contextual context; instead, it is determined, demanding that they adapt their actions accordingly. The short-term model posits that some basic teaching practices (Cheng & Tsui, 1998) may be explicitly mandated for all educators.

(ii) **Long-Term Strategy:** This seeks to enhance teacher competency, equipping educators with enough information, techniques, and confidence to refine their teaching ways. Enhancing teacher competency requires an ongoing, systematic approach to learning and review. Summative, formative, and diagnostic assessments of educators facilitate the development of professional competencies, enabling more effective teaching in many situations.

(iii) **Dynamic Strategy:** The fundamental premise underlying this strategy is that nearly all elements affecting the framework of teacher efficacy are subject to modification. Teachers' performance and teaching contexts should be altered to improve teacher effectiveness and teaching competence. This strategy is intended to make a teacher an educational leader so they can powerfully progress in internal and external teaching contexts.

From the models discussed, a comprehensive understanding of the various factors for teacher effectiveness and the potential for achieving optimal levels of such effectiveness. The efficacy of a teacher, determined by competencies and performance, is crucial in any educational environment. Implementing internal and external criteria for teacher effectiveness would improve the teacher's competency and performance. This would impact the operational role of educators and subsequently influence students' learning outcomes.

***Robert Marzano's Model (2007*)**

Robert Marzano's model (2007) of teaching effectiveness, detailed in The Art and Science of Teaching: An Inclusive Outline for Effective Instruction, offers a framework of 10 questions that delineate a systematic classification for effective instructional design. This encompasses formulating learning objectives, facilitating student engagement with new information, offering opportunities for practice to enhance comprehension, involving students, and executing efficient classroom management.

CHAPTER-II

REVIEW OF RELATED LITERATURE

CHAPTER-II

REVIEW OF RELATED LITERATURE

2.1.0. Introduction

A literature review is a critical component of academic research that establishes a comprehensive body of information on a certain topic. It offers an inclusive summary, analysis, and evaluation of the related literature, highlighting significant findings, methodological approaches, theoretical progress, and gaps in the current research (Fannon, 2021). A literature review to offer an explicit consideration of the current state of research, classify areas where further study is needed, and establish a foundation for new research creativities. The review aims to develop a critical and nuanced understanding of these dynamics by conducting an extensive literature search, ultimately formulating strong research questions and objectives (Snyder, 2019). In conducting a literature review, researchers systematically gather and assess previous studies, drawing connections between them to demonstrate how knowledge in the field has progressed. By examining a wide range of sources, the literature review helps map out the scholarly landscape, showcasing the diversity of perspectives and methodologies employed (Boote & Beile, 2005). This method includes classifying key themes, trends, and discussions within the literature and distinguishing emerging fields and advanced approaches (Creswell & Creswell, 2018).

This chapter offers the theoretical foundation and new visions, requiring the researcher to assess what previous studies have established and the methodologies they employed. It involves understanding the current study's theoretical orientation, methodologies, and significance to develop reliable and dependable research findings (Fannon, 2021). A systematic literature review covers hypothetical and theoretical knowledge on topics such as workload, self-efficacy, teacher effectiveness, and their interrelations. This study enhances the workload, self-efficacy, and teacher effectiveness among secondary-level school teachers. It employs an extensive literature search to build a critical and inclusive understanding, which aids in formulating the research problems and systematically progressing knowledge in the field.

2.2.0. Objectives of the Literature Review

The objectives of the present literature review were-

1. To survey and make current literature related to the research topic, identifying key concepts, theories, methodologies, and findings.
2. To determine areas where gaps or variations exist in the current body of knowledge and highlight opportunities for further research.
3. To advise the development of research questions, hypotheses, or objectives based on the understandings increased from the literature review.
4. To create a hypothetical framework or theoretical model that supports the research study, drawing upon related theories and theoretical frameworks identified in the literature.
5. To back in choosing appropriate research methodologies, data collection techniques, and analytical methods based on the methodologies employed in prior studies.
6. To deliver context for interpreting research findings, comparing and contrasting findings from different studies, and classifying designs or trends in the data.
7. To endorse knowledge synthesis by contributing findings from numerous studies, identifying main themes or theoretical perspectives, and offering new understandings or viewpoints.
8. To classify actual suggestions of the research findings for practitioners, representatives, or other stakeholders based on the understandings increased from the literature review.

2.3.0. Methodology of the Present Literature Review

The researcher used the semi-systematic and integrated literature review strategy to plan this investigation. Although semi-systematic literature reviews are less rigorous than systematic literature reviews, he follows systematic procedures such as formulating inclusion and exclusion criteria and choosing search terms (Wong et al., 2013). According to Wong et al. (2013), the semi-systematic review aids in conceptualising research topics throughout various disciplines that obstruct a comprehensive systematic review procedure. Finding gaps in the research is also beneficial. Like semi-systematic reviews, integrative literature reviews combine related literature from various disciplines and methods to review, critique, and synthesise it cohesively, resulting in new frameworks and

perspectives (Cronin et al., 2008; Torraco, 2005). In this review of the literature, the researcher first determined a few search terms, keywords, and phrases associated with the chosen field of study and listed a few online research databases to determine the research literature that is currently available (Wong et al., 2013). The researcher then used the determined search phrases to compile literature from those databases. The researcher also collected research literature from books and printed journals simultaneously. The detailed process is provided in Table 2.1. and Figure 2.1. below.

Table 2.1. The Procedure Followed for the Literature Review

Phases	Procedure	Description
Phase - 1	Identification of Search terms (Keywords and Phrases)	"Workload", "Self-Efficacy", "Teacher Effectiveness", "Workload and Self-Efficacy", "Workload and Teacher Effectiveness", "Self-Efficacy and Teacher Effectiveness", "Workload, Self-efficacy and Teacher Effectiveness", "Teachers", "School Teachers", "Secondary Level School Teachers", "Workload among Secondary Level School Teachers", "Self-Efficacy among Secondary Level School Teachers", "Teacher Effectiveness among Secondary Level School Teachers", "Workload and Self-Efficacy among Secondary Level School Teachers", "Workload and Teacher Effectiveness among Secondary Level School Teachers", "Self-Efficacy and Teacher Effectiveness among Secondary Level School Teachers", and "Workload, Self-efficacy, and Teacher Effectiveness among Secondary Level School Teachers."
Phase - 2	Selection of Searched Databases	Online Scopus, Google Scholar, ResearchGate, ProQuest, ScienceDirect, and Shodhganga.
		Printed-Journals, Edited Books
Phase - 3	Inclusion Criteria	i. Studies were conducted on school teachers. ii. Publish between 2000 to 2024. iii. Research should provide essential details regarding the study's location, participants, objectives, methodology, data collection instruments, and results.
	Exclusion Criteria	i. Not accessible in the English language. ii. Absence of full texts. iii. Insufficient data.
Phase - 4	Literature Selection	The complete literature selection process is presented in the figure 2.1.

2.3.1. Literature Selection Process

The above-mentioned databases were searched using all notorious search terms, keywords, and phrases, and several studies (theses and articles) were revealed. Meanwhile, only a small number of the research was relevant to the current topic. After reading the study titles, the researcher downloaded just the studies that were appropriate to their area of proficiency. In the second stage, the researcher went over the study abstracts and removed a few more studies that weren't related. Lastly, for the full-paper review, the researcher included the most relevant studies (Total- 128).

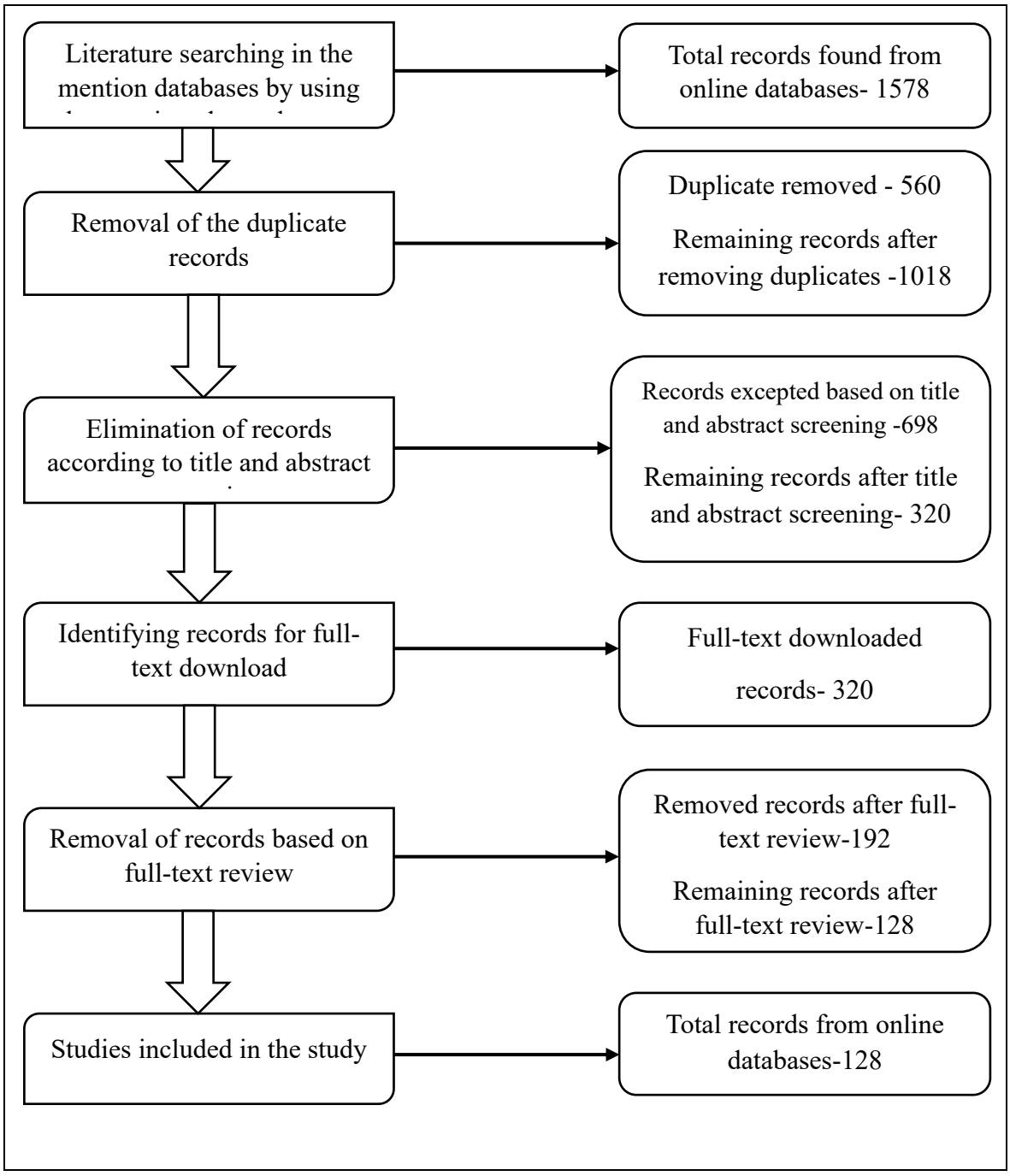

Figure 2.1. Literature Selection Process

2.4.0. Review of Related Literature

In this part, the research literature is briefly summarised. All of the research is categorised under the following main headings: studies on workload, studies on self-efficacy, studies on teacher effectiveness, studies on the relationship between workload and self-efficacy, studies on the relationship between workload and teacher effectiveness, and studies on the relationship between self-efficacy and teacher effectiveness.

2.4.1. Studies on Workload

Workload is the expanse of work and responsibilities allocated to someone and finished within a specific time frame. Studies Abroad, Gull and Akhtar (2014) used a stratified random sampling technique on 400 secondary school teachers in public secondary schools at Lahore Cantt in Pakistan to explore the relationship between workload and work satisfaction of secondary school teachers. The data was analysed utilising Pearson Product Moment Correlation Coefficient (Pearson r), Mean, S.D., T-test, one-way ANOVA, and post hoc (Tukey) test. The study revealed a strong, positive correlation between workload and work satisfaction. Njuguna et al. (2022) conducted a descriptive survey among 4,447 teachers in Kiambu County, Kenya public secondary schools, to measure the relationship between workload and job satisfaction and how they influence the association between teachers and their supervisors. The researcher used a self-made questionnaire for data collection. Descriptive and inferential statistics were utilised to evaluate the data. The study found that workload was positively associated to job satisfaction with the association with the supervisor. Raman and Othman (2017) conducted a descriptive survey among 100 school teachers in the Kapit district, Sarawak, Malaysia, to identify the factors driving workload stress levels among school teachers. Mean, S.D., and regression analysis were used for data analysis. The findings of this study showed that teachers experience stress at a moderate level and are influenced by the workload. Shah et al. (2024) conducted a survey among 332 teachers in Tengah District, Melaka, Malaysia, to explore the relationships between work-life balance, workload, and work environment on teacher burnout. Descriptive statistics were utilised for data analysis. The findings indicated a significant positive association between workload and burnout, highlighting the impact of increased demands on educators. Wahab et al. (2024) performed a thorough literature assessment of 15 previous investigations to investigate educators. Wahab et al. (2024) conducted a systematic literature review of 15 past studies to explore the teacher's workload factors and their impact on their well-being. The researchers used Web of Science and Scopus for the review. The results indicated that the effect caused by heavy workload should be spoken

about quickly to help the educators' well-being. Waweru and Ndambuki (2021) randomly selected 155 primary school teachers in Kasarani, Nairobi County, Kenya, to measure the relationship between workload and occupational stress among public primary school teachers. Mean, S.D., chi-square test, and Pearson product-moment correlation coefficient were used for data analysis. The result found no significant correlation between workload and occupational stress in public primary school educators. Also, the result found that a high level of occupational stress is connected with a high workload. Werang (2018) conducted a survey on 94 elementary school teachers in the Boven Digoel district, Papua, to examine the potential effect of workload, individual characteristics, and school climate on teachers' emotional exhaustion in Christian elementary schools. Linear regression analysis technique was applied for data analysis. The findings reported that workload, individual characteristics, and school climate partially positively affect teachers' emotional exhaustion in elementary schools.

2.4.2. Studies on Self-Efficacy

Studies in Abroad, Alibakhshi et al. (2020) used purposive sampling on 20 English foreign language teachers in Iran to understand the consequences of teachers teaching self-efficacy. The Teacher's Sense of Efficacy Scale developed by Tschannen-Moran and Hoy (2007) was applied for data collection. The findings showed that self-efficacy was changed by consequences: pedagogical, learner-related, and psychological. Also, findings showed that high self-efficacy affects teachers' teaching practices, learners' motivation, and achievement. Alkan and Ardem (2012) surveyed 122 university chemistry teachers in Turkey to explore the relationship between chemistry special field competency and the teacher's self-efficacy beliefs of chemistry teachers. The researcher used the Teachers Sense of Efficacy Scale developed by Tschannen-Moran and Hoy (2001) for data collection. Correlation analysis revealed a positive and medium relationship between chemistry special field competency and the teacher's self-efficacy beliefs of chemistry teachers. Aurah and McConnell (2014) used purposive sampling on 168 Kenyan and 189 US Pre-service teachers to observe and associate science teacher efficacy beliefs of elementary pre-service teachers. The researcher applied the Science Teaching Efficacy Belief Instrument developed by Enochs and Riggs (1990) to collect data. MANOVA analysis found that a significant contact between gender and country. Also, the results found a significant main effect for the country but not gender. Results indicated a statistically significant disparity in the PSTE, with the USA scoring higher on normal and a significant difference score, with Kenya scoring higher. Boateng (2024) made a survey

study on 375 kindergarten teachers from Ghana to examine rural and urban kindergarten teachers teaching efficacy. The Teacher's Sense of Efficacy scale was developed by Tschannen-Moran and Hoy (2001) for data gathering. Mean, S.D., and T-test were applied for data analysis. The finding revealed that kindergarten teachers in rural school settings reported higher levels of teaching efficacy in instruction and pupil engagement than their urban counterparts. Gordon et al. (2022) conducted a systematic quantitative literature review on 29 empirical research studies to identify the interaction between curriculum and assessment reform and teacher's self-efficacy. The results indicated that environmental determinants lower TSE during reform. Also indicated that supporting high TSE professional learning was a necessity. Karabiyik and Korumaz (2013) conducted a descriptive survey among 83 school teachers in Turkey to determine the relationship between teachers' self-efficacy perceptions and job satisfaction levels. The researcher collected the data through the self-efficacy perception instrument developed by Gülebağlan (2003) and the Minnesota Satisfaction Questionnaire developed by Weiss, Dawis, England, and Lofguist (1967), which was adapted in Turkish by Baycan (1985). The collected data were evaluated using Pearson correlation analysis and One-way ANOVA. The study indicated a significant and optimistic correlation between a teacher's self-efficacy perceptions and job satisfaction. Kazanopoulos et al. (2022) conducted a survey study on 265 general and special education teachers in Greece to investigate special and general education teacher's self-efficacy for inclusive practices at Greek secondary education schools. The Teacher Efficacy for Inclusive Practices scale was used to gather information. Collect information analysed through Mean, S.D., and ANOVA. The results revealed that special education teachers presented higher efficacy in using inclusive instructions, collaborating, and dealing with disruptive behaviours. Kim and Kim (2010) surveyed 169 early childhood educators in Korea to explore the profiles of South Korean early childhood educators' teacher self-efficacy and contributing factors to teacher self-efficacy. The researcher used Bandura's Teacher Self-Efficacy Scale (TSS) for data collection. Correlations and simultaneous multiple regressions were applied for data analysis. The results found that Korean early childhood educators' teacher self-efficacy was multi-dimensional, and each dimension had exclusive predictors. Korean early childhood educators' (ECE) centre climate has arisen as the best significant provider to all teacher self-efficacy domains. Depression severity in teachers was related to teacher self-efficacy, but the facets of association were different conferring to the traits of the efficacy domains. Lesha (2017) used a cross-sectional study among 850 (666 female and 184 male) primary school teachers in Albania to examine the teacher's self-efficacy beliefs with respect to

age. The Teacher's Sense of Efficacy Scale (Tschannen-Moran & Woolfolk-Hoy, 2001) was used for data gathering. Mean, S.D., ANOVA, and Post Hoc Tests were utilised for data analysis. The results highlighted age increases, even self-efficacy in student engagement, instruction strategies, and classroom management. Malinen et al. (2013) surveyed 1911 in-service teachers from China, Finland, and South Africa to investigate teacher's perceived efficacy for teaching in inclusive classrooms. teacher's self-efficacy for inclusive practices scale developed by Malinen, Savolainen, et al. (2012); Savolainen, Engelbrecht, Nel, and Malinen (2012); Sharma, Loreman, and Forlin (2012) was employed to collect the data. The study's results revealed that in all countries, experience in teaching students with disabilities was the most solid prophet of self-efficacy. At the same time, the prophetic power of other variables diverged from country to country. Martins and Chacon (2021) conducted a survey study on 36 teachers from Brazil to examine whether teacher education developments for inclusive practices involving sources of self-efficacy affect teachers' self-efficacy. The teacher Efficacy for Inclusive Practices Scale developed by Sharma, Loreman, and Forlin (2012) was used for data gathering. The study results indicated an increase in teacher's self-efficacy, direction to direct The potential of self-efficacy sources discussed in teacher education. Moe et al. (2010) surveyed 399 primary school teachers from northern Italy to understand how good strategies and praxis interact with positive affect and self-efficacy to conclude a teacher's job satisfaction. The researcher used the Ohio State TeacherEfficacy Scale created by Tschannen-Moran and Woolfolk Hoy (2001) for data collection. Structural equation modelling analysis was utilised for data analysis. The study found the mediating role of positive affect and self-efficacy opinions in the relationship between teaching plans and practices and job satisfaction. Nowak (2019) randomly selected 359 teachers in Poland to determine self-efficacy in teachers working in special schools. The "Sense of Efficacy Test" by Chomczynska-Rubacha and Rubacha was used for data collection. Collected data was analyzed through the Mann-Whitney U test, factor analysis, cluster analysis, and correlation. The results reported that the sense of self-efficacy of different characteristics of school teachers is influenced by their gender, residential location, maternal educational attainment, and the kind of institution where they are employed. Also, the results reported that the teachers who reach high and low scores in terms of self-efficacy construct a model explaining their assignment to the groups. Ramakrishnan and Salleh (2018) systematically reviewed 30 articles on self-efficacy in Malaysia to focus on mainstream teachers' and inclusive teachers' self-efficacy of special needs. The results revealed that a positive relationship affects teachers' self-efficacy in pedagogy, experience, classroom and student

management, students' involvement, teaching strategies, and classroom instructions. Skaalvik and Skaalvik (2009) surveyed 2249 elementary school and middle school teachers from Norway to know associations among teachers' observation of the school context, teachers' self-efficacy, collective teacher efficacy, teacher burnout, teachers' job satisfaction, and teachers' beliefs. The researcher applied the Norwegian Teachers Self-Efficacy Scale developed by Skaalvik & Skaalvik, 2007 to collect the data. The collected data were evaluated through structural equation modelling. The result of the study revealed that teachers' self-efficacy, collective efficacy, and two dimensions of burnout were contrarily associated with school context variables and teacher job satisfaction. Velthuis et al. (2013) used a cross-sectional sample of 292 pre-service primary teachers in the Netherlands to explore the outcome of teacher training on pre-service primary teachers' science teaching self-efficacy. The Science Teaching Efficacy Belief Instrument created by Fisser, Ormel, and Velthuis (2010) was utilized for data collection. Data was analysed applying Mean, S.D., and ANOVA. The findings revealed that the science teaching self-efficacy of pre-service teachers, specifically, enriched during years 1 and 2 and not during years 3 and 4. Higher levels of self-rated subject-matter knowledge and science teaching experience in primary schools contributed to higher levels of personal self-efficacy for science teaching. Veronika et al. (2018) conducted an experimental study on 61 secondary school teachers from Slovakia to examine how the level of teachers' self-efficacy influences the quality of their lesson management. Mean analysis was applied for data analysis. The results reported that the higher the level of self-evaluation reached by teachers, the better teachers are in their assumption of active teaching practices. Woodcock et al. (2022) randomly selected 140 primary school teachers from New South Wales, Australia, to measure the relationship between primary teachers' self-efficacy and inclusive education practices. Several questionnaires and Tschannen-Moran and Woolfolk Hoy's teacher self-efficacy scale were applied to data collection. Thematic analysis was utilised for inspecting and analysing the qualitative data. The results showed that while teachers with high and low efficacy had related conceptual understanding about inclusive education, their teaching practices differed. Also, the result found that informing teachers about what inclusive education is may only have a limited impact on teachers' actual inclusive education practices.

Indian studies, Attri and Devi (2017) incidental sampling used on 240 private B.Ed. college teachers of Himachal Pradesh in India to compare the relationship between professional commitment and self-efficacy of secondary teacher educators. The investigator used the Professional Commitment Scale for Teacher Educators by Sood (2011) and the General

Self-Efficacy Scale adapted by Attri (2005) to gather the data. The gathered data was examined using Pearson's correlation. The results reported that affirmative correlations occurred among overall professional commitment and its different dimensions (i.e., commitment to the learner, commitment to the society, commitment to the profession, commitment to achieving excellence for professional actions, and commitment to basic values) and self-efficacy of private B.Ed. college teachers. Chandrika (2022) randomly selected 110 higher secondary school teachers from the Mathura district of Uttar Pradesh in India to measure self-efficacy concerning gender and teaching experience between higher secondary school teachers. A self-made questionnaire was used for data collection. Collected data were analysed through Mean, S.D., analysis of variance, and T-test. The results reported no significant difference in self-efficacy among higher secondary school educators about teaching experience. Also, the results reported a significant difference in the self-efficacy of higher secondary school teachers concerning gender. Sahoo and Panda (2021) conducted a study of purposive sampling on 60 teacher educators in Paschim Medinipur District of West Bengal to measure the technological self-efficacy of teacher educators at secondary level. The researcher applied a self-made interview schedule for teacher educators to collect information. The results showed that 48.33% of teacher educators hardly used and 30% of teacher educators never used computers to prepare different digital teaching-learning models, but 75% of teacher educators continuously and 16.66% of teacher educators very often used internet search engines (e.g., Mozilla Firefox, Google Chrome etc.) to find web pages related to their subject matter interests. The result also showed that 83.34% of teacher educators used mobile devices for educational purposes. Sarkar and Roy (2024) conducted a random sampling study on 120 secondary-level teachers in Coochbehar District, West Bengal in India, to determine the level of self-efficacy among the Secondary level teachers about inclusive education. Teachers Efficacy for Inclusive Practices Scale developed by Umesh Sharma, Tim Loreman, and Chris Forlin (2011) was applied for data collection. The collected data were analysed using Mean, S.D., T-test, and Z-test. The results found a notable difference between secondary-level teachers who are male and female. At the same time, there is no significant difference between graduate and post-graduate qualified teachers, and Secondary-level teachers in the science and arts streams have significantly different levels of self-efficacy. Seema and Sobha (2017) stratified sampling on 350 secondary teachers in Kerala to explore the teacher efficacy of secondary school teachers. The researcher used a self-made questionnaire for data collection. Percentage analysis, T-test, and ANOVA were utilised for data analysis. The result showed that secondary school teachers hold a normal level of teacher efficacy.

The results indicated substantial disparities in the mean scores of teacher efficacy concerning the type of management and teaching experience. However, no significant differences exist in the mean scores of teacher efficacy concerning gender, locale, and subject of specialisation. Sharma and Kaur (2017) randomly selected 500 married female educators employed at schools and colleges in Punjab, India, to measure the difference in teacher self-efficacy of school and college women teachers. Self- made questionnaire was applied for data collection. Percentage analysis and T-test were utilised for data analysis. The finding showed that school and college women teachers do not differ significantly in teachers' self-efficacy. Also, the findings showed that women teachers generally have an average level of teachers' self-efficacy.

2.4.3. Studies on Teachers Effectiveness

Teacher effectiveness is influenced by various demographic factors, as evidenced by earlier studies. Adeniyi and Anuodo (2018) conducted a survey on 150 secondary schools from Osun State in Nigeria to measure the extent to which personality traits and emotional intelligence can determine teaching effectiveness. The investigator used a self-made questionnaire to collect the data. The researcher used percentages, one-way ANOVA, and multiple regression statistics to analyse the data. The findings reported that teachers were highly effective in teaching. Also, the result reported that personality traits significantly influenced teachers' teaching effectiveness. Further results revealed that emotional intelligence significantly effects the teaching effectiveness of teachers. Findings showed that extroversion and association management were the two traits that predicted the teacher's teaching effectiveness. Francis et al. (2020) conducted a survey among 972 (54 principals and 918 teachers) secondary schools in Southwestern Nigeria to investigate the effect of principals' leadership characteristics on teachers' effectiveness. The investigators applied a self-made questionnaire to gather the information. The gathered information was evaluated using descriptive and inferential statistics. The result revealed that teachers in Southwestern Nigerian public secondary schools were temperately effective. Results also revealed that integrity, humanity, courage, humility, collaboration, justice, accountability, and abstinence significantly influenced teachers' effectiveness in Southwestern Nigerian public secondary schools. Further, the result found that those principals' leadership characteristics positively influenced teachers' effectiveness in Southwestern Nigerian public secondary schools. Kiadese (2011) randomly selected 205 secondary school teachers from Ogun State in Nigeria to explore the teaching effectiveness of prevocational subject teachers. The researcher used a self-made questionnaire for data collection. The

collected data were analysed using Mean, S.D., T-test, and simple percentage. The findings of the study showed that there was relatively low teaching effectiveness among prevocational subject teachers. Findings also showed that the government and agency responsible for teacher development should implement an action plan to enhance teachers' capacity to use ICT-driven pedagogy, modern classroom practices, and assessment techniques. Okolocha and Onyeneke (2013) conducted a descriptive survey on 261 public secondary school principals from Nigeria to explore the assessment of Anambra State principals of the efficacy of business studies educators in classroom management, time management, and the utilisation of lesson notes for instruction. The investigator used a self-made questionnaire to collect the data. The collected data were analysed using the Mean and Z-test. The study results reported that business studies teachers were ineffective in adhering to some aspects of time management, classroom management, and lesson note preparation and delivery for optimal achievement of instructional goals and improved students' academic achievements and, consequently, employability. Onyekuru and Ibegbunam (2013) randomly selected 80 secondary school teachers from the Emohua local government area of Rivers State in Nigeria to understand the teaching effectiveness of secondary school teachers. The Teacher Effectiveness Checklist was used for data collection. The result of this study showed that the teaching effectiveness of teachers from secondary school was below average. Findings also revealed that teaching experience and teachers' qualifications significantly influence the teaching effectiveness of secondary school educators, whereas gender has shown no substantial impact.

Teacher is the pillar of any nation. In Indian studies, Agarwal et al. (2021) conducted descriptive research using 400 secondary school teachersin the Mathura District of Uttar Pradesh, India to explore the relationship between teacher effectiveness, personality and emotional intelligence of gender. The researcher applied the Teacher Effectiveness Scale (TES) by Dr. (Mrs.) Umme Kulsum to collect the data. The investigator used comparative as well as correlation methods for data analysis. This study's results indicated a positive relationship between teacher effectiveness with personality, between personality with emotional intelligence and between teacher effectiveness and emotional intelligence of secondary school teachers. Ahmad (2019) conducted a descriptive survey on 200 secondary school teachers working in government secondary schools of Kashmir Valley to compare teacher effectiveness of direct recruited and promoted senior secondary school teachers. The researcher applied teacher effectiveness developed by Umme Kulsum (2000) to gather the data. The collected data were analysed using the Mean, S.D. and 'T' tests. The findings of the study showed that the directly recruited teachers have better teacher

effectiveness as compared to promoted senior secondary school teachers. Azad and Kuchy (2021) randomly selected on 400 high school teachers in Anantnag District of Jammu and Kashmir in India to study the teacher effectiveness of high school teachers. The researcher used the Teacher Effectiveness Scale developed by Sujata Mishra (1999) for data collection. The collected data were analyzed using Mean, S.D., T-test and ANOVA. The results highlighted that teachers significantly differ in teacher effectiveness with respect to gender, marital status, type of school, and teaching experience, and they do not differ in teacher effectiveness with respect to the locality of school. Bala and Bashir (2016) conducted a descriptive survey using 200 (100 male and 100 female) secondary school teachers in Kashmir to assess the relationship between the teaching effectiveness of secondary school teachers and their work motivation. The investigator utilised the Teacher Effectiveness Scale standardised by Yashmin Ghani Khan (2011) and the Work Motivation Questionnaire developed by Dr K. G Agarwal (2006) to collect the data. The investigator explored the collected data by using the coefficient of correlation technique. The finding of this study reveals that a negative significant relationship exists between the teaching effectiveness of secondary school teachers with work motivation. Barkat (2021) conducted a survey on 100 teachers from government and private secondary schools in Hyderabad city in India, to examine the reasonable analysis of the instructional efficacy of trained versus unskilled educators at the secondary school level. The investigator applied a teacher effectiveness scale created by Dr. Santosh Dhar and Dr. Upinder Dhar to gather the information. The gathered information was analysed using Mean, S.D., and T-test. The study's result reported a significant difference between the level of teaching effectiveness of trained and untrained secondary school teachers. Also, the result reported that teaching trained teachers is more effective than untrained teachers. Barman et al. (2015) conducted a survey among 151 B.Ed. college student-teachers from West Bengal in India to explore the level of teaching effectiveness of teacher educators who are working in different govt.-aided and private-unaided/self-financed B.Ed. colleges. The investigator applied a self-made teacher effectiveness questionnaire. Mean, S.D., T-test and graph were used to analyze the data. The findings indicated the teaching effectiveness of the B.Ed college educators is moderately satisfactory. Results also showed that the teaching effectiveness of government-aided teaching the performance of B.Ed. college teacher educators is relatively superior than that of other teacher educators. working in different private/self-financed B.Ed colleges in West Bengal. Findings further reported that govt.-aided and self-financed B.Ed. college teacher educators exhibit considerable variation in their teaching effectiveness across multiple dimensions, including subject mastery, presentation style,

motivational strategies, effective communication, student-teacher interaction, informal academic support, and personal engagement attributes. Begum and Vaidharani (2024) stratified random sampling used on 250 secondary school teachers of Chennai District of Tamilnadu to examine differences in teacher effectiveness of secondary teachers based on gender and locality of school. Data was collected using through teaching effectiveness scale. Data was analysed using Mean, S.D., Percentage, T-test and one-way ANOVA. The result indicated that many male and female teachers are equally efficient in carrying out their duties in the school. Also, the result indicated that the locale or the areas where the teachers come from have no role in determining the effectiveness of secondary school teachers in Chennai District. Bhat (2017) conducted a descriptive study among 200 teachers of central universities from Delhi to measure the teaching effectiveness of prospective teachers in relation to stream and gender. The researcher collected data using the teacher effectiveness scale developed and standardised by Umme kulsum. Mean, S.D., 'T'- test and ANOVA were used for data analysis. The findings of the study found that the Impact of pre-service teacher education training on the teaching effectiveness of the pupil-teachers was found to be significant. Also, findings found no significant effect of gender on the teaching effectiveness of the pupil-teachers. Further, the results showed that the effect of the stream on the teaching effectiveness of pupil-teacher was significant. Bhat and Arumugam (2020) randomly selected 200 (120 rural and 80 urban) secondary school teachers from the Baramulla district of Jammu & Kashmir to know the efficacy of instructors, specifically concerning secondary educators. The Teacher Effectiveness Scale constructed and standardised by Umme Kulsum was used for data collection. The collected data were analysed applying Mean, Standard Deviation, T-test, Skewness and Kurtosis. The study's findings highlight that the graduate and post-graduate secondary teachers of district Baramulla of Jammu and Kashmir differ significantly regarding their teacher effectiveness. Bhat and Raju (2019) adopted normative survey research on 450 high school teachers (305 males and 145 females) teaching in government and private high schools in Kulgam district of Jammu and Kashmir. The researcher used a self-made questionnaire to gather the data. The gathered data was explored through SPSS by using the necessary statistical techniques. The study results showed that the teachers' effectiveness of high school teachers is normal. The result found that the teachers' effectiveness of high school teachers significantly differs concerning their gender. The findings also explore that there are no significantly differs in marital status and teaching experience. Bhullar (2019) surveyed 160 secondary school teachers in Amritsar, India, to understand the effectiveness of secondary school teachers in relation to their personality

type. Teacher Effectiveness Scale by Dr. Umme Kulsum and the Introversion Extroversion Inventory by Dr. P.F. Aziz and Dr. Rekha Gupta were used for collecting the data. Mean, S.D., SEM and t-tests were utilized for analysing the data. The study found that female secondary school teachers are better at preparing and planning for the dimension of teacher effectiveness than male secondary school teachers. It is reported that school teachers are better at classroom management, subject matter knowledge and interpersonal relations dimension of teacher effectiveness than urban secondary school teachers. It is highlighted to be better preparing and planning for teaching, classroom management, and knowledge of the subject matter, teacher characteristics and interpersonal relations dimensions of teacher effectiveness than secondary school teachers having introverted personalities. Biswas (2017) made a survey study among 130 secondary and higher secondary school teachers from Nadia and Murshidabad districts of West Bengal, India to measure the teacher effectiveness of secondary and higher secondary school teachers in relation to gender, location and academic stream. The investigator used the Teacher Effectiveness Scale (2000) developed by Dr. Umme Kulsum for collecting the data. The collected data was resolved using Mean, Standard Deviation and 'T'- test. The result of the study reveals that male and female school teachers do not significantly in their teacher effectiveness. Also, the results reveal a significant difference in teacher effectiveness between the school teachers with respect to locality, class handled and academic streams. Borkar (2013) conducted a descriptive survey on 1000 Secondary school teachers from India to compare the association between teacher effectiveness of secondary school teachers and teacher stress. The researcher used a self-made questionnaire for data collection. Mean, S.D., T-test and correlation coefficients were applied to evaluate the data. The results highlighted that less effective teachers are under a higher stress level than highly effective teachers. The results also showed that teacher stress is negatively correlated with teacher effectiveness. The findings reported that teacher stress also varied in male and female teachers even though both were similarly positioned in terms of salary and workload. Brintha and Kumar (2019) surveyed 700 teachers from Tamil Nadu in India to discover and improve the measurement model for teacher effectiveness for upper primary school teachers to measure such constructs as appropriate. The researcher used the Umme Kulsum teacher effectiveness scale to collect the data. The study's findings reveal that the developed model for teacher effectiveness consisted of classroom management, preparation and planning of teacher, and teacher characteristics, which significantly influence teacher effectiveness at the upper primary level school teachers. Chauhan (2016) randomly selected 96 secondary and senior secondary teachers from Patiala and Fatehgarh

Sahib Districts of Punjab in India to examine the teacher effectiveness of secondary and senior secondary school teachers. The Teacher Effectiveness Scale developed and standardized by Dr. Umme Kulsum was applied to gather the information. The gathered information was analysed utilising Mean, S.D. and T-test. The findings of the study revealed that there was no difference in the teacher effectiveness of male school teachers and female school teachers. Also, the findings showed a significant difference in teacher effectiveness in relation to locale, class handled and academic streams. Chauhan and Sharma (2019) surveyed 300 teacher educators from Uttar Pradesh in India to determine the impact on teaching effectiveness among teacher educators. The Teacher Effectiveness Scale developed by Pramod Kumar and D. N. Mutha was used to collect the data. The collected data were analysed using Mean, S.D., and T-test. The study revealed no significant difference among male and female teachers' groups. Also, the result revealed no significant difference in the mean of the science and arts teachers group. The results revealed a significant variations in the average of urban and rural teacher educators. Dafare (2021) conducted a descriptive survey using 400 secondary school teachers from Wardha District of Maharashtra in India to examine the relationship between teacher effectiveness, mental health and teacher stress among secondary school teachers. Pramod Kumar and D.N. Muttha developed the Teacher Effectiveness Scale; the Stress Index was developed by Srivastav and Sing. Mental Health Inventory developed by Jagdish and Shrivastava were applied to gather the information. The gathered data was evaluated by the spending rank difference correlation method. The results found that mental health problems negatively correlate with teacher effectiveness. It may be because that mental condition shows reflection in one's acts and deeds. Also, the results found that teacher stress negatively correlates with teacher effectiveness, as the stress among teachers increases as their teaching effectiveness decreases. Dash and Barman (2016) conducted a survey using 100 secondary school teachers in the district of Purba Medinipur, West Bengal, in India, to determine the level of teaching effectiveness among school teachers. The researcher used a self-made questionnaire to collect the data. Mean, S.D., T-test, ANOVA and graph were applied to data analyses. The study's findings discovered that the level of teaching effectiveness among school teachers is respectable in the district of Purba Medinipur. Results also showing that there is no significant difference among the secondary school teachers concerning the efficiency of their instruction evaluated according to gender, academic stream, training status, and qualifications. Further, the outcome of the study highlights a significant difference among secondary school teachers concerning their level of teaching effectiveness on the basis of school location. Devi and Talukdar (2018)

conducted a descriptive survey study among 272 (136 male and 136 female) college teachers from Kamrup District of Assam to explore the effectiveness of college teachers in relation to their mental health. The Teacher Effectiveness Scale by Dr. Shallu Puri and Prof. S.C. Gakhar and the Employees Mental Health Inventory by Dr. Jagadish were applied to gather the data. The gather data were evaluated in terms of Mean, S.D., Pearson Correlation and T-test. This study showed that the majority of the scores, for both males and females, in diverse sides of teaching effectiveness are high and almost similar. Also, results revealed that significant positive correlation between mental health and teaching effectiveness of college teachers. Further, the results showed that significant differences prevail in teachers' mental health in colleges belonging to rural and urban areas, which directly affect the effectiveness of the teachers. Dogra and Singh (2015) conducted a survey among 300 regular and 200 contractual tertiary teachers from Rohilkhand in India to find out the effect of the nature of appointment on the teaching effectiveness of tertiary teachers in association to their gender, level of teaching and nature of courses. The Teacher's Functional Effectiveness Questionnaire developed by Mrs. Rashmi Mehrotra was used for gathering the data. The researcher appraised the collected data using Mean, S.D., 't'-test and 'F' tests. The results of this study revealed that the nature of the appointment did not influence the teaching effectiveness of tertiary teachers. The study found that gender did not yield any significant influence on the teaching effectiveness of regular and contractual tertiary teachers. Further, the results showed that regular teachers of the undergraduate level are more effective in teaching than contractual teachers of the same level of teaching. Also, it was found that contractual teachers of non-professional courses were less effective in their teaching than regular teachers. Dutta (2019) randomly selected 450 trained secondary school teachers from West Bengal in India to explore teacher effectiveness with respect to age and teaching experience. Kulsum Teacher Effectiveness Scale (KTES) was used for data gathering. Mean, S.D., T-test, and ANOVA were utilised for data analysis. The study's results revealed no significant differences in teacher effectiveness with respect to age and teaching experience. Dwivedi and Gupta (2020) randomly selected 400 undergraduate college teachers in Lucknow, India, to find out college teachers' teaching effectiveness, emotional intelligence and organisational commitment. Researchers used the Teacher Effectiveness Scale devised by Umme Kulsum to measure teaching effectiveness, the Organizational Commitment Scale by Upinder Dhar, Prashant Kumar and D.K. Srivastava to measure Organizational Commitment, and Emotional Intelligence Scale developed by Anukool Hyde, Sanjyot Pethe and Upinder Dhar used for measure the emotional intelligence. Percentage analysis was used for data analysis. The researcher used a

percentage analysis of this study. Results revealed that college teachers obtained high teaching effectiveness. College teachers showed high emotional intelligence. Moreover, 25.75% of teachers executed high organizational commitment. Geetah (2010) conducted a descriptive survey among 140 secondary school teachers in Shimoga district, Karnataka, India, to assess the difference in teacher effectiveness of secondary school teachers with esteem to their gender, locality and type of school management. The Teacher Effectiveness Scale developed and standardized by Dr. Umme Kulsum was employed to collect the data. The collected data were measured by using Mean, S.D. and T-test. The results of this study reveal that there is no significant difference in teacher effectiveness between male and female secondary school teachers. Also, the study results show that urban school teachers have higher teacher effectiveness than rural school teachers, and government teachers have higher teacher effectiveness than private school teachers. Jain (2007) conducted a survey on 75 secondary school teachers from Delhi in India, to find out the teaching effectiveness of teachers and their attitudes towards the teaching profession concerning sex, type of school and teaching experience. The investigator applied the self-made questionnaire to collect the data. Mean, S.D., CRs, Chi-square and Correlation were utilized for data analysis. The findings of the study indicated that the teaching effectiveness and attitudes of teachers towards the teaching profession with respect to sex, type of school and teaching experience were significant. The study highlights that less experienced female teacher in private schools displays better classroom teaching. Results indicated a significant negative relationship between teachers' attitudes and teaching effectiveness. Jha and Singh (2012) conducted exploratory and empirical research on 250 engineering college faculty of Uttar Pradesh in India to investigate the relationship between emotional intelligence and teaching effectiveness. The Emotional Intelligence Scale by Upinder Dhar, Sanjyot Pethe, and Anukool Hyde (2007) and the Teacher Effectiveness Scale developed by Dr. Shalu Puri and Prof. S. C. Gakhar (2010) were applied for collecting the data. The researcher used descriptive statistics for data analyse. The result found a positive correlation between emotional intelligence and teacher effectiveness, both self-reported and students rated among ten components of emotional intelligence considered in the study. It is shown that there was no significant difference in teacher effectiveness among the two groups. Also, the result shows that the gender differences in the scores of emotional intelligence and teacher effectiveness were insignificant. Jitender and Sarkar (2019) conducted a descriptive survey among 80 college teachers from Rohtak district, Haryana, India, to measure the teaching effectiveness of college teachers in about their sense of humour and gender. The Teacher Effectiveness Scale developed by Kumar & Mutha (1974) and the

Teacher's Sense of Humour Scale developed by Malik and Kapoor (2014) were used to gather the data. The researcher analysed the collected data using Mean, S.D., and T-Test. The findings revealed no substantial change in the efficacy of college instructors in relation to their sense of humour and gender. Habib (2018) randomly selected 850 secondary school teachers from two districts of Kashmir in India to investigate teacher effectiveness and general intelligence of secondary school teachers in connection to gender and type of school. The researcher applied the Teacher Effectiveness Scale by Umme Kulsum (2013) and the Standard General Progressive Matrices (1938) to collect data. The results of the study showed that there is no significant difference in teacher effectiveness between male and female secondary school teachers. The researcher also found a significant difference in the general intelligence of male and female secondary school teachers. It is revealed that teacher effectiveness is positively and significantly related to general intelligence. Haldar and Chal (2020) conducted a survey study among 526 (305 in-service and 221 pre-service) teachers to compare teaching effectiveness between in-service and pre-service teachers at the secondary school level. The Teacher effectiveness scale constructed by Umme-Kulsum (2000) was applied to collect the information. The collected information was examined using the normal distribution, T-test, and Spearman's Rank Different Correlation. The results showed that the majority of in-service teachers of secondary schools had a high level of teaching effectiveness. Also, the results showed that the majority of pre-service teachers of secondary schools possess an average level of teaching effectiveness to a high level of teaching effectiveness. Findings revealed no significant difference in teaching effectiveness between in-service and pre-service secondary school teachers. Kalita and Saha (2013) conducted a descriptive survey among 70 (40 male and 30 female) English teachers from the Kamrup district of Assam in India to measure teacher effectiveness in teaching English in secondary schools concerning some personal variables and the teaching-learning situation. The investigator utilized a self-made questionnaire to collect the data. The researcher examined the collected data using Mean, S.D., and T-Test. The result of the study showed that there is no significant difference in the effectiveness of the teaching English in the secondary schools of the area. The result also showed no significant difference in effectiveness between male and female teachers teaching English at the secondary level. Kaur (2018) developed a correlational study on 50 secondary school teachers district of Kapurthala in India to assess teacher effectiveness in relation to organizational climate. Kulsum's Teachers Effectiveness Scale , constructed by Kulsum (2000) and Organizational Climate Inventory, constructed by Chattopadhyay and Aggarwal (1988) were utilized for gathering the data. The data were analyzed exhausting

by Mean, S.D., T-test and correlation. The result of the study discovered that there is no significant relationship between teacher effectiveness and organizational climate. Also, the findings of this study discovered that no substantial correlation exists between teacher effectiveness and organizational climate to their gender and type of school. Kori (2023) randomly selecte 160 secondary school teachers from India to assessment of male and female secondary school educators concerning pedagogical efficacy and institutional atmosphere. The results highlighted that Male and female teachers do not differ significantly in concerning their Teaching Effectiveness. Kumari and Chahal (2017) conducted a descriptive study on 100 teachers from the Sirsa District of Haryana in India to explore the teacher effectiveness concerning secondary school educators with respect to school type and gender, locality and level of experience. The researcher used the Teacher Effectiveness Scale constructed and validated by Dr. (Mrs.) Umme Kulsum (2011) to collect data. Mean, S.D. and T-test were applied for analyzis of collecting data. The findings show that the teacher effectiveness of government school teachers is higher than private school teachers; gender and locality do not have any significant role in teacher effectiveness. Also, the findings show that teachers having more than ten years of experience are highly effective as compared to those having less than 10 years of experience in secondary schools. Kumar and Kumar (2015) randomly selected 300 primary school teachers in Vellore District in India to inspect to determine if there were any notable differences in the effectiveness of primary school instructors based on specific background variables. The data were collected with the help of the Teacher Effectiveness Scale by Umme Dixit (1993). Mean, S.D., T-test and F-test were used for data analysis. The result showed that there is no significantly affected of gender, kind of institution, field of study, nature of the school, geographical location, marital status, age, teaching specialisation, and family structure of primary school educators in relation to teacher effectiveness. Kumar and Khadir (2013) surveyed 96 engineering college teachers from Ernakulam District of Kerala State in India to examine various attributes of teaching effectiveness from an engineering college. The researcher collected data through a self-administered questionnaire. The collect data were analyzed by using Mean, S.D. and Chi-square. The findings of the study found there is a deficiency in collaborative effort, instructional efficacy, and classroom management behaviour. The results also highlight the enhancement of teaching traits and recommended strategies to improve teacher effectiveness, consequently elevating the quality of education and student outcomes, are also addressed. Lalchhandami and Lalnunfeli (2019) researcher was used a descriptive survey method on 186 secondary school teachers in Mizoram India to masseur the teacher

effectiveness among secondary school teachers' relation to gender, educational qualification, stage in which they are teaching and their level of experience. The investigator used a teacher effectiveness scale constructed and validated by Dr. Umme Kulsum (2011) for gather of the data. The researcher analyzed the data through Mean, S.D., T-test, and inferential statistics. The results reveal that the school teachers have high level of effectiveness. Also, result showed that there was no significant difference in their effectiveness level respect to their gender, educational qualification, stage in which they are teaching. It is found that the level of effectiveness of teachers is based their year of experience. Lushai and Fanai (2019) conducted a descriptive survey among 81 primary school teachers (18 headmasters and 63 teachers) from Champhai district of Mizoram in India to examine the teacher effectiveness of government primary school teachers towards knowledge of the subject matter, etc and teacher characteristics. The Teacher Effectiveness Scale developed and standardized by Dr. Umme Kulsum was applied for collecting of the data. The collected data were considered by using Mean, S.D. and T-Test. The result of the study discloses that there is no significant difference in effectiveness between the headmaster and the teacher towards knowledge of the subject matter, etc. and teachers' characteristics. The result of this study also highlights trained educators are more effective than unqualified educators towards knowledge of the subject matter, etc. and teacher characteristics. Malik (2017) randomly selected 100 secondary school teachers from the Rohtak district of Haryana in India to measure the the efficacy of secondary school educators in connection with their sense of humour. The Teacher Effectiveness Scale by Dr. Pramod Kumar and Dr. D.N. Mutha (1974) was used for data gathering. The collecting data was evaluated statistically by consuming mean, S.D. and Pearson coefficient of correlation with the help of SPSS. The findings indicated a positive correlation between teaching effectiveness and the socioeconomic status of secondary school teachers. Mangalamma and Vardhini (2017) researched a survey study on 100 secondary school teachers in Bangalore South District, Karnataka, India, to assess the relationship between teacher effectiveness and the teaching aptitude of teachers. The researcher collected the data using by Teaching Aptitude Scale developed by Dahiya and Singh (2004) and the Teacher Effectiveness Scale (2006) developed and standardized by Umme Kulsum. The researcher used Pearson's Product Moment Coefficient of Correlation, T-test and F-test statistical for data analysis. The findings of this study show that there is a significant relationship between teacher effectiveness and the teaching aptitude of teachers. The study also reveals a significant difference in the teacher effectiveness of different types of school management and gender. Nagaraju and Janakiramaiah (2024) conducted a systematic

random sampling on 800 high school teachers in the Nandyala district of Andhra Pradesh, India, to measure the differences in teacher effectiveness among high school teachers based on gender and stream. Means, S.D., and T-test were used for data calculated. The result showed that male high school teachers are more effective in teaching in the areas of classroom management, knowledge of subject matter, teacher characteristics and teacher effectiveness than female teachers. Naik (2024) conducted a survey among 60 secondary school teachers of Angul districts, Odisha, India, to investigate the relationship between teacher effectiveness, job satisfaction, and occupational stress among secondary school teachers. The results reported that the majority of secondary school educators demonstrate moderate levels of instructional efficacy. Also, the result reported that gender does not appear to influence teacher effectiveness significantly. Nigam (2018) studied 240 secondary school teachers in New Delhi to find out the teaching efficacy of secondary school educators across various caste categories and service fields. The researcher collected data using the Teaching Effectiveness Scale by Kumar and Mutha (1974). The researcher applied a T-test, S.D. and Mean to analyse the data. The result found that there was no significant difference between the teaching effectiveness of secondary schools with regard to their caste categories and service streams. Pachaiyappan and Raj (2014) made a survey study among 130 secondary and higher secondary school teachers from Districts of Tamilnadu in India to measure the teacher effectiveness of school educators. The Teacher Effectiveness Scale developed by Umme Kulsum was utilized for gathering the data. The gathered data were evaluated using mean, standard deviation, T-test and one-way ANOVA. The result of the study reported that there is no significant difference in teacher performance between male and female educators. The result also reported there exists a notable disparity in teacher effectiveness across school educators concerning region, arts and science disciplines, secondary and higher secondary levels, teaching experience, and kind of school management. Pareek and Kulshrestha (2021) randomly selected 150 secondary schoolteachers in the Jaipur district of Rajasthan, India, to assess the correlation between job satisfaction and teacher effectiveness. Teachers' effectiveness scale developed by Dr. Pramodkumar and Dr. D.N. mutha was applied for gathering the information. The investigator used Mean, S.D., T-test and correlation to analyse the gathered information. The study's findings showed no significant difference between job satisfaction and teacher effectiveness of male and female secondary school teachers. Also, the study's findings showed a positive relationship between job satisfaction and teacher effectiveness. Patel (2015) randomly and purposively selected 80 Science and Art teachers (40 Science and 40 Art) from Dhabhara block, District Janjgir-Champa, Chhattisgarh in India, to measure the

significant difference in teacher effectiveness of science and art teachers. The researcher applied a self-made questionnaire to collect the data. Collected data were analysed through Mean, S.D., and T-test. The findings of this study highlight that there is no significant difference in the teacher effectiveness of science and art teachers. Pathak and Saxena (2020) randomly selected 125 secondary school teachers from Mathura District to measure the difference in gender-based teachings in government or private or rural and urban areas. The investigator used a self-made questionnaire to collect the data. The result of the study revealed that the teachers in the secondary schools located in rural and urban areas found meaningful differences. Also, the result found no meaningful difference between male and female teachers. Raju and Vardhini (2022) used purposive sampling on 300 secondary school teachers from the Kurnool district in the Rayalaseema region of Andhra Pradesh. Dr. Umme Kulsum (2012) developed the Teacher Effectiveness Inventory for data collection. The collected data was analysed by applying statistical techniques like Mean, S.D., T-test, and F-test were used for the study. The results reported that there is a significant difference between marital status, caste, teachers working locality, and the teaching experience of secondary school teachers with respect to teacher effectiveness. Also, the result revealed that there is no substantial disparity between the average scores of educators effectiveness among secondary school teachers based on the type of school. Rahaman and Rahaman (2018) conducted a descriptive survey study among 100 private B.Ed. college teachers in the district of Murshidabad in India to equate the teaching effectiveness of teachers of private B.Ed. colleges. The investigator applied a self-made teaching effectiveness scale to collect the data. The investigator was estimated using the Mean, S.D., T-test, and Graph for considering the data. The result of the study reported that there is no significant variation among male and female teachers with respect to teaching effectiveness. Also, the result indicated that there is nonotable disparity between urban and rural educators respect to teaching effectiveness. Rani and Devi (2015) randomly selected 150 teachers from the Sonepat district of Haryana in India to understand the effect of gender, type of school, and teaching experience on teacher effectiveness. The Teacher Effectiveness scale by Puri and Gakhar (2010) was utilized for gathering the information. The collected data was analyzed using Means, S.D., and T-tests. The results of the study revealed that there is no significant difference in teacher effectiveness between male and female school teachers. Also, the results found that a significant difference exists between teachers teaching in government and private schools on teacher effectiveness. Further, findings showed that there exists a significant difference between teachers having teaching experience below and above 10 years on teacher effectiveness. Reddemma and Reddy

(2017) randomly selected 200 teachers from the Chittoor district in Andhra Pradesh, India to understand how satisfied teachers differ significantly from unsatisfied educators regarding many job-related aspects in relation to their instructional efficacy. The teaching effectiveness scale developed and standardized by Prof. S. Padmanabhaiah (1984) was applied for data collection. The collected data was analyzed by Means, S.D., and T-test. The results of the study highlight that satisfied teachers in their jobs could perform effectively, disappointed instructors were unable to perform to their potential. Ritu and Singh (2012) conducted a survey using 128 secondary school teachers from the Hohtak district in Haryana, India, to determine the teacher effectiveness of secondary school teachers in relation to concerning their gender, type of school, and locality. The investigator collected the data using the teacher effectiveness scale developed by P. Kumar and D. N. Mutha. The investigator applied the Mean, S.D., and T-test for data analysis. The study's results indicated no substantial difference in teacher effectiveness among gender, type of school, and locality. Sadhukhan (2018) randomly selected 600 (300 male and 300 female) secondary school teachers from three districts of West Bengal in India, namely Nadia, North 24 Parganas, and South 24 Parganas, to understand the teaching effectiveness of teachers in relation to gender, locality, subject stream, and experience. The investigator used a self-made questionnaire to gather the information. Mean, S.D., and T-test were used for data analysis. Research results expose no difference in the teaching effectiveness of secondary school teachers and gender or subject stream. However, disparities exist among teaching effectiveness, teaching experience, and school location. Saikia and Chaliha (2018) purposively selected 300 higher secondary school teachers of Dibrugarh District of Assam in India to measure the teacher effectiveness of the secondary school teachers of Dibrugarh District. The Teacher Effectiveness Scale designed by Dr. Umme Kulsum was utilized for gathering the data. Gathered data was analyzed using Mean, S.D., Skewness, Kurtosis, and T-test. The result of the study revealed no significant difference between the secondary school teachers consuming professional and general qualifications as far as their effectiveness is concerned. Sehjal et al. (2021) conducted a survey on 100 (38 male & 62 female) secondary school teachers from the Jalandhar district of Punjab in India to investigate the teacher effectiveness of secondary school teachers in relation to their approach towards information technology. The researcher collected data using the Teacher Effectiveness Scale (2010) developed by Dr. Shallu Puri and Prof. S.C. Ghakhar and the Attitude Scale Towards Information Technology (2011) developed by Nasrin and Islahi.The gathered data was examined using statistical methods such as Mean, S.D., T-test, and Coefficient of Correlation. The findings revealed that at both stages of importance,

there exists no significant relationship between teacher effectiveness and attitude towards information technology of secondary school teachers with regard to gender. Sen's (2017) multistage sampling technique was used on 187 senior secondary school teachers from the Kangra district of Himachal Pradesh in India to understand the teaching effectiveness of senior secondary school teachers with regard to their gender, teaching experience, and educational qualification. The Teacher Effectiveness Scale by Parmod Kumar and D. N. Mutha was employed to collect the data. The researcher analyzed the data using the Mean, S.D., and T-test. The results of this study revealed that teaching experience has no significant impact on the teaching effectiveness of senior secondary school teachers. The study reveals no significant difference in teaching effectiveness between male and female teachers. The result also found that the high qualification has nothing to do with the effectiveness of teaching in the case of senior secondary school teachers. Seth and Pandey (2024) randomly selected 100 secondary school teachers from Prayagraj City in India to find out the difference between the teacher effectiveness of female and male secondary school teachers. The Teacher Effectiveness Scale was developed by Dr. Subhash Sarkar and Abhijit Deb (2020) to gather data. Statistical techniques such as Mean, S.D., and T-test were applied to analyse the results. The finding revealed no significant difference between female and male teachers' teacher effectiveness at the higher secondary level. Sethi (2015) conducted a survey using 120 school teachers to explore the association between mental health and the teachers' effectiveness in secondary schools in Abohar, India. The A.K Srivastava Mental Health Inventory and Teacher Effectiveness Scale developed by Dr. Umme Kulsum were applied to gather the data by the researcher. Collected data were analyzed through the K-S test, t-ratio, and Pearson's correlation coefficient. The findings reveal a significant relationship between mental health and teacher effectiveness among secondary school teachers. Results of the study show no significant differences between male and female government and private secondary school teachers based on their mental health and teacher effectiveness. Seth and Pandey (2024) randomly selected 100 secondary school teachers from Prayagraj City in India to measure the teacher effectiveness of secondary school teachers with reference to their gender. The Teacher Effectiveness Scale (2020), developed by Dr. S. Sarkar and A. Deb was used for data collection. Researchers applied Mean, S.D., and T-tests for data analyzis. The finding revealed no significant difference between female and male teachers' effectiveness at the higher secondary level. Siddappa (2018) conducted a descriptive survey on 200 teacher educators from Karnataka State in India to measure their teaching effectiveness in relation to their anxiety and stress. The Teacher Effectiveness Scale (1999 Revised) by Pramod Kumar and D.N. Mutha was

used to collect the data. The researcher used the Mean, S.D., T-test, and coefficient of correlation for analyzis. The findings indicate that teacher educators in government and self-financed teacher education institutions who exhibit low anxiety demonstrate greater teaching effectiveness compared to their counterparts in government institutions who experience high levels of anxiety. Also, the findings reported that the teacher educators working in government teacher education institutions with low stress are more effective in teaching than those working in government teacher education institutions with high stress. Singh (2017) conducted a descriptive survey study among 300 (100 male and 200 female) teachers teaching in teacher education colleges placed in Gautam Budh Nagar of Uttar Pradesh state in India to know the effect of emotional intelligence on the effectiveness of teacher educators. Pramod Kumar and D.N. Mutha developed the Teacher Effectiveness Scale, which the researcher used to collect the data. The collected data was evaluated using mean, S.D., T-test, and pearson's product-moment correlation. The findings of the study indicate that both female and male teacher educators were categorized as highly effective. Also, the result highlights a significant correlation between emotional intelligence and the effectiveness of teacher educators. Singh and Attri (2020) randomly selected 400 secondary school teachers in Chamba and Solan of Himachal Pradesh in India to understand teacher effectiveness among secondary school teachers in relation to concerning their gender and stream. Researchers used the teacher effectiveness scale developed and standardized by Puri and Gakkhar (2010) to collect the data. Mean, S.D., and T-test were utilized to analysed the data. The results showed that teacher effectiveness of gender and postgraduate and undergraduate secondary school teachers is equal. The findings indicated that rural secondary school teachers are less effective than urban teachers. Additionally, the findings revealed a significant difference in the effectiveness of secondary school teachers with over 10 years of teaching experience compared to those with less than 10 years. Sivasakthi and Muthumanickam (2012) studied the normative survey method among 900 school teachers in Chennai and Thiruvallur Districts of India to investigate the teacher effectiveness of school teachers. The Teacher Effectiveness Scale was constructed and standardized by Kumar and Mutha (1974) and was applied to gather the information. The statistical analysis employed the Mean, S.D., T-test, and F-test. The findings of the research revealed that teachers significantly differ in teacher effectiveness with respect to gender, place of school, level of teaching, and they do not differ in teacher effectiveness with respect to marital status, age, type of management, years of experience, and monthly income of teachers. Thakur and Garg (2020) conducted a correlational study among 393 teachers from English-medium schools in Greater Mumbai to discover the

relationship between teacher effectiveness and the quality of the work-life of school teachers. The Teacher Effectiveness Scale developed by Umme Kulsum and the Quality of Work Life Scale based on Walton's quality of work life model were applied to gather information. The investigator used Pearson's Product Moment Coefficient of Correlation ('r') for data analyzing. The results revealed that a significantly low relationship between the variables of teacher effectiveness and quality of work life. Toor (2014) studied survey research on 850 secondary school teachers in Punjab to determine the relationship between teacher effectiveness, general intelligence, and creativity among secondary school teachers. The Teacher Effectiveness Scale by Kumar and Mutha (1999), the Standard General Progressive Matrices (1938), and the Divergent Production Abilities by Sharma (2006) were utilized to collect the information. The results of the study reported that there is no significant difference in the teacher effectiveness of male and female secondary school teachers. Further, the study's findings revealed that male teachers of private secondary schools are more creative than female teachers of private secondary schools, but not in the case of government secondary schools. Additionally, Tyagi (2013) did an exploratory and descriptive study with 100 secondary school teachers in the Ghaziabad district of Uttar Pradesh, India. The goal was to find out how teachers of different ages and backgrounds felt about how well they taught. The researcher applied a self-made questionnaire to assemble the data. Mean, S.D., T-test, and correlation were utilized for statistical analysis of the data. The result of the study reveals that the demographic characteristics, i.e., social background, marital status, school teaching experience, teaching subjects, and qualifications of secondary school teachers, were influenced by different dimensions of their teaching effectiveness. Uddin and Das (2020) conducted a descriptive survey on 100 college teachers from Hyderabad in India to examine the teaching effectiveness level of teachers from UG and PG colleges. The Teacher Effectiveness Scale developed and standardized by Dr. Umme Kulsum was applied to gather the information. The gathered information was analysed using the F-test and percentage method. The study findings indicated no substantial change in response to personality, subject matter, relational competency, teaching style, classroom management style, and personal competency between male and female teachers. Vats (2019) conducted a descriptive survey among 200 (100 urban and 100 rural) B.Ed. college teachers of the Panipat district to examine their teacher effectiveness in relation to their hardiness. The investigator used the Teacher Effectiveness Scale (TES) developed by Kumar and Mutha's (1999 Revised) and the Hardiness Scale developed by Singh's (2008) to collect the data. The researcher analysed the data through Mean, S.D., T-test, and correlation. The finding of the study

reveals that there is no significant difference between the teacher effectiveness of prospective teachers with respect to location. The findings of this research also found there exists a positive link between teacher effectiveness and hardiness. Venkatesh (2015) conducted a survey among 336 primary school teachers from the Medak district of Telangana State, India, to identify the teacher effectiveness concerning gender and management among primary school educators. The study used the Teacher Effectiveness Scale by Dr. Shallu Puri and Prof. S.C. Gakhar for data collection, and the Mean, S.D., and T-test were used for data analysis. The findings report that there is a significant difference in teacher effectiveness with respect to gender and management among primary school teachers. Yadav (2016) conducted an ex post facto study on 480 teachers and 480 students in Haryana to determine the teacher effectiveness, emotional intelligence, and competence of secondary school teachers. The researcher collected the data through the Teacher Effectiveness Scale developed by Hoy and Mc Ber (2002), the Emotionally Intelligence Scale developed by Anakool H.S. and Sanjyot (2001), and the researcher's self-made teacher competence scale. The correlation coefficient and T-test were utilised to analyzes the collected data. The results show that teacher effectiveness and emotional intelligence in secondary school are significant. It highlights the relationship between teacher effectiveness and emotional intelligence. Zaidi et al. (2022) investigated a survey study among 100 teacher educators of B.ED. institutions in Delhi to measure the teaching effectiveness of teacher on the basis of their type of institution, gender, and subject of teaching. The researcher used a self-made Teacher Educator's Teaching Effectiveness Scale for collecting the data. Mean, S.D., and T-test were utilized for analysing the data. The study's findings demonstrated moderate levels of teaching effectiveness. The results indicated that there was no substantial variation in teacher educators' teaching effectiveness based on their type of institution, gender, and teaching subject except in the case of student-teacher relations and the use of ICT.

2.4.4. Studies on Workload and Self-efficacy

Studies in Abroad, Belizario et al. (2024) conducted cross-sectional survey research using 687 teachers from Peru to measure the effect of perceived stress, job satisfaction, and workload on professional self-efficacy among Peruvian regular basic education teachers. The findings reported a negative effect of workload on professional self-efficacy. Cayupe (2023) conducted a descriptive survey among 300 primary school teachers in Peru to examine self-efficacy, organizational commitment, and workload as interpreters of life satisfaction in primary school teachers: the mediating role of job satisfaction. The results

found that self-efficacy and organizational commitment were positive predictors of job satisfaction, while workload was a negative predictor. Also, results found that the mediating effect of job satisfaction between self-efficacy, life satisfaction, workload, and overall life satisfaction was confirmed. Dewi et al. (2024) conducted a survey among 52 public high school teachers in Indonesia to find the influence of workload on burnout among secondary school teachers and whether self-efficacy moderates the impact of workload on burnout. Simple linear regression and relaxed regression analysis were applied for data analysis. The findings revealed that workload positively and significantly impacts secondary teacher burnout during the COVID-19 pandemic. Also, findings revealed that self-efficacy did not moderate the effect of workload on secondary teacher burnout throughout the COVID-19 pandemic. Eee et al. (2022) made a survey among 269 teachers from Malaysia to measure the level of workload, self-efficacy, and mental health problems among teachers in vocational colleges and further aspect at the relationship between these concepts. The data were analyzed through Mean, S.D. and Pearson correlation. The findings of the study revealed that the teachers' self-efficacy and mental health problems were at a high level. Also, the findings revealed that the workload was formerly considerable, however the curriculum area load has now been adjusted to a moderate level. Minaya-Herrera et al. (2022) used purposive sampling on 321 university teachers in Peru to explore whether workload and adaptation to online classes predict professional self-efficacy in university teachers. Correlation analysis was applied for data analysis. The result reported a significant effect of adaptation and workload on professional self-efficacy. Szabo et al. (2021) studied survey research on 769 teachers in Norway to determine the relationship among teachers' efficacy-related experiences, work satisfaction, and workload during the pandemic. The results highlighted a significant positive correlation between job satisfaction and self-efficacy, as well as workload and the sense of competency.

2.4.5. Studies on Workload and Teachers Effectiveness

Studies in Abroad, Amalu (2013) used an ex post facto design on 600 public secondary school teachers in Cross River State, Nigeria, to measure the impact of stress from workload on the professional effectiveness of secondary school teachers. The findings revealed that stress from workload has no significant influence on seven dimensions (lesson presentation, use of instructional aids, evaluation of students, learning motivation, classroom management, supervision of co-curricular activities, and personal/professional qualities) of professional effectiveness. Barrios et al. (2023) conducted a survey on 1,004

high school students, a high school principal, and 23 high school teachers in Philippines to explore the relationship between workload and efficiency of high school teachers. The findings revealed that there is no relationship between workload and teaching efficiency. Kanwal et al. (2023) carried out survey research among 30 teachers in Lahore, Pakistan, to measure the influence of workload on teachers' efficacy and their students' academic performance at the university level. The results indicated that teacher workload significantly impacts student academic achievement and teacher efficiency and teacher effectiveness. Magalong and Torreon (2021) conducted a descriptive survey among 75 grade one teachers from Ubay, Bohol, Philippines, to assess the teaching workload management and its impact on the teachers' well-being and effectiveness in all public schools. The findings reported no significant relationship between the extent of management of teachers' teaching workload, their well-being, and their profile regarding age, highest educational attainment, and years of teaching experience. Also, the findings reported that there is no significant relation between the extent of management of teachers' teaching workload and their overall wellbeing; and between the extent of management of teachers' teaching workload and their teaching effectiveness. Nuwaha (2023) conducted a descriptive survey among 130 school teachers in Uganda to identify the relationship between teachers' workload and their effectiveness in secondary schools. Pearson correlation was used for data analysis. The findings indicated a modest yet substantial positive connection between teachers' workload and their effectiveness in secondary schools.

2.4.6. Studies on Self-Efficacy and Teachers Effectiveness

Studies in Abroad, Adeyemo and Chukwudi (2014) randomly selected 300 pre-service teachers in the South-West region of Nigeria to measure the outcome of emotional intelligence and teacher efficacy on the teacher effectiveness of pre-service teachers. Teacher Self-efficacy Scale was developed by Tschannen-Moran M. and Woolfolk Hoy (2001), and the Teaching Performance Assessment Scale was used for data collection. The Pearson product-moment correlation and multiple regression analyses were conducted for data analysis. The results of this study bring to light that emotional intelligence and teacher efficacy had a prognostic impact on teacher effectiveness. Clark and Bates (2003) conducted a review study to understand self-efficacy beliefs and teacher effectiveness: implications for professional development. The findings of this study revealed that teacher efficacy is an essential variable in teacher effectiveness that is regularly linked to teacher behaviours and student outcomes. Also, this study's findings revealed that schools with

high-performance professional development assimilate main dimensions that provision and support skill increase and efficacy beliefs. Fathi and Derakhshan (2019) conducted a study among 256 teachers from Iran to measure the role of teacher self-efficacy and emotional regulation as predictors of teaching stress. The Teacher's Sense of Efficacy Scale developed by Tschannen-Moran and Woolfolk Hoy (2001), the emotion regulation questionnaire established by Gross and John (2003), and the Teacher Stress Inventory developed by Boyle et al. (1995) were applied for data collection. The researcher was used for data analysing using structural equation modelling. The results reported that emotional regulation and teacher self-efficacy variance in teaching stress. Haider and Mushtaq (2017) carried out a review study to understand a conceptual framework that deliberates how self-efficacy significantly links domestic leadership with teaching effectiveness. The findings established the mediating effect of self-efficacy in linking servant leadership and teaching effectiveness. Klassen and Tze (2014) studied a meta-analysis using 43 studies to understand the magnitude of the relationship between teachers' psychological characteristics of self-efficacy and personality and external measures of teaching effectiveness. The results reported a significant but small effect between overall psychological characteristics and teaching effectiveness. Also, the result found that the strongest effect of self-efficacy on evaluated teaching performance. Musa and Awoyemi (2016) conducted ex-post-facto research on 250 secondary school teachers from Kwara State in Nigeria to determine the impact of emotional intelligence, school climate, and self-efficacy on the teaching effectiveness of secondary school teachers. The teacher effectiveness scale was developed by Melby (1995) and the teacher efficacy scale (Gibson & Dembo, 1984) were utilised for data collection. The research applied multiple regression analysis, t-test, and ANOVA for data analysis. The study's findings reported that the independent variables, both jointly and relatively, contributed significantly to the prediction of the teaching effectiveness of secondary school teachers.

Indian studies, Paschal and Srivastava (2021) conducted a survey using 258 secondary school teachers in Patna, Bihar, India, to measure the relationship between self-efficacy and teacher effectiveness of school teachers. The researcher used a self-made questionnaire to collect the data. The collected data were analysed through Mean, S.D., 'T'-test, and correlation. The findings reported a significant relationship between self-efficacy and teacher effectiveness in secondary school teachers. Further, findings reported a significant difference in the mean scores of secondary school teachers in their self-efficacy regarding their gender, type of institution, and teaching experience. Sehgal et al. (2016) surveyed 575 secondary school teachers and 6,020 students in India to measure the association between

teacher self-efficacy and teacher effectiveness. The investigator applied the teachers sense of efficacy scale developed by Tschannen-Moran and Woolfolk-Hoy (2001) and the student's evaluation of teaching rating scale developed by Toland and De Ayala (2005), for collecting the data. The collected data were resolved through Means, S.D., and correlations. The findings indicated a positive connection between teacher self-efficacy and the dimensions of teacher effectiveness: the teacher's delivery of course information, the teacher's role in facilitating teacher-student interactions, and the teacher's role in changeable student learning. The findings also indicated that cooperation and principal leadership are related to teacher self-efficacy. Raju and Vardhini (2020) conducted a survey study among 100 secondary school teachers in the Kadapa district of Andhra Pradesh, India, to assess the connection between teacher effectiveness and self-efficacy among secondary school teachers. The researcher used the teacher effectiveness scale developed by Dr. Umme Kulsum (2012) and the teacher self-efficacy scale developed by Vishal Sood (2016) for data collection. Mean, S.D., t-test, and analysis of variance were employed for data analysis. The result showed a significant connection between teacher effectiveness and self-efficacy. Singh (2024) studied survey research among 442 high school teachers from different government, missionary, and private schools in Patna, India, to measure the relationship between spiritual intelligence, self-efficacy, and teacher effectiveness of high school teachers. The Teacher Effectiveness Scale was developed by Dr. Pramod Kumar and Dr. D.N.Mutha (1999), and a self-made self-efficacy questionnaire was used for data gathering. Mean, S.D., and chi-square tests were applied for data analysis. The findings showed a significant association between different levels of spiritual intelligence, self-efficacy, and teacher effectiveness in high school teachers. Thapliyal and Joshi (2023) carried out survey research using 100 private secondary school teachers from Delhi, India, to explore the association between teacher effectiveness and job satisfaction among secondary school teachers. Kumar and Mutha developed the Teacher Effectiveness Scale, and the Job Satisfaction Scale was developed by Meera Dixit (1993) and was applied for data gathering. The findings demonstrated a substantial positive correlation between teacher effectiveness and teachers' job satisfaction at the secondary level.

2.5.0. Research Trends

As declared earlier, the researcher prepared a review matrix based on the research trend analysis while reviewing the included studies. Based on 128 included studies, the trend analysis results are presented in this section.

2.5.1. Area-Wise Distribution of the Reviewed Studies

At this stage, the literature review is in progress. After a comprehensive assessment and investigation of all the available papers, the researcher acknowledged 128 most related to the research topic. The studies were divided into three areas: those focused on high school teacher effectiveness, those on self-efficacy, and those investigating the association between teacher effectiveness and self-efficacy. Of the 128 articles, 7 (5%) related to workload, 24 (19%) related to self-efficacy, 76 (59%) related to teacher effectiveness, 5 (4%) related to workload, and self-efficacy, 5 (4%) related to workload and teacher effectiveness, and 11 (9%) addressed the association among self-efficacy and teacher effectiveness. The area-wise distribution of these studies is shown in figure 2.2.

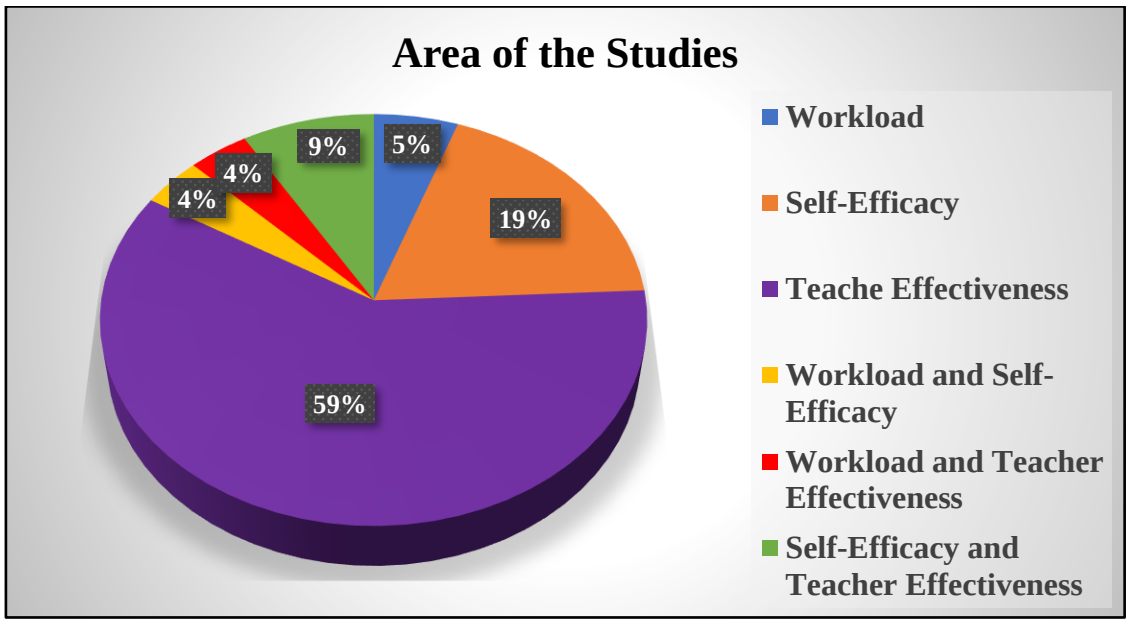

Figure 2.2. Area-wise distribution of the reviewed studies

2.5.2. Method and Design Distribution of the Reviewed Studies

The predominant study methods and designs utilised were descriptive survey, meta-analysis, ex-post-facto research, experimental research, and review-based designs. The bar graph (Figure 2.2.) illustrates the distribution of studies employing these methodologies as follows: 115 studies (90%) employed survey research, 1 study (1%) utilised meta-analysis, 3 studies (2%) implemented ex-post-facto research, 1 study (1%) conducted experimental research, and 8 study (6%) applied review-based techniques. The findings indicate that descriptive survey research methods were the most prevalent and deemed appropriate for future studies in the sector. The methodology and design distribution of the examined research are presented in figure 2.3.

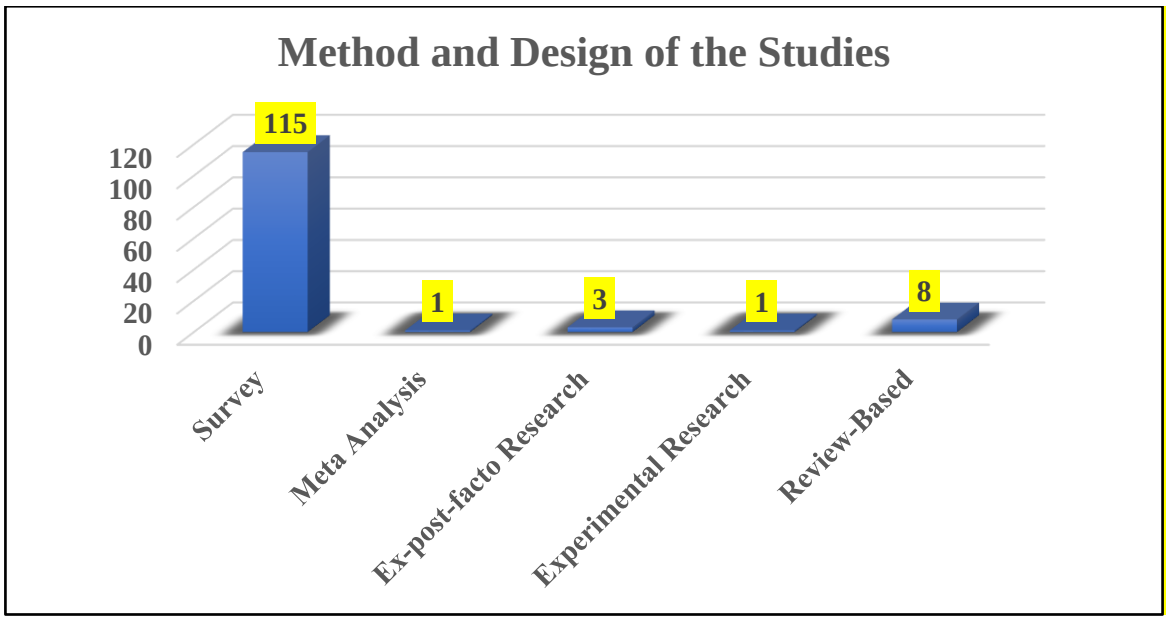

Figure 2.3. Method and Design distribution of the reviewed studies

2.5.3. Location-Wise Distribution of the Reviewed Studies

Furthermore, the pie chart analysis, which illustrates the geographical distribution of the review literature for this study, reveals that the bulk of the studies, notably 81 (63%) out of 128, were done in India. Conversely, only 47 (37%) of the pertinent studies were conducted Abroad, highlighting the necessity for increased global research. Figure 2.4. shows the distribution of approaches and designs employed in the reviewed studies.

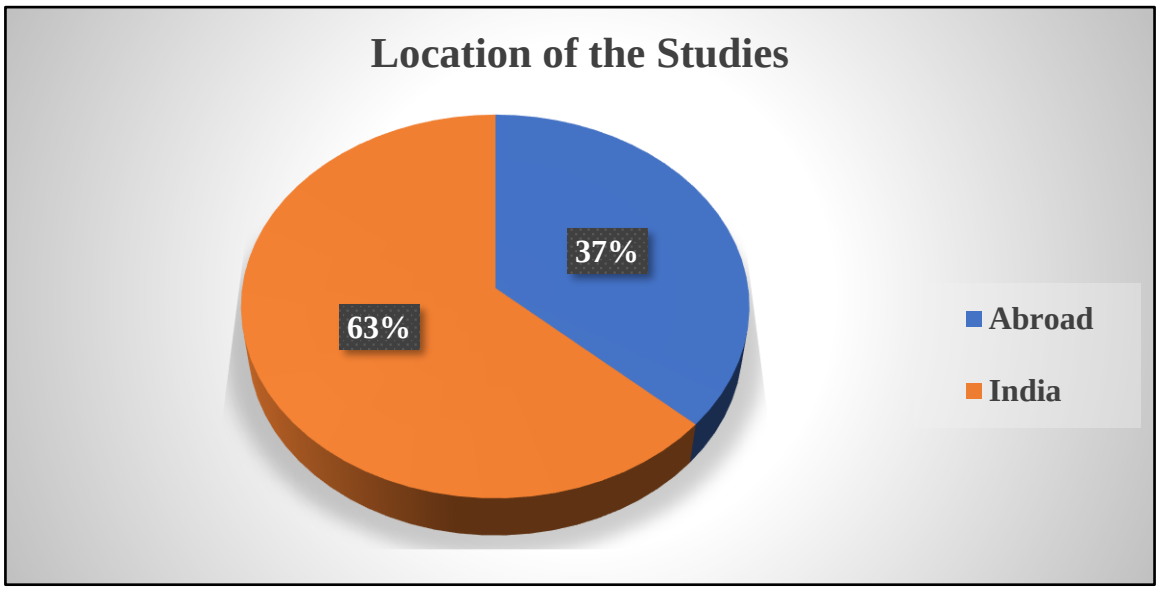

Figure 2.4. Location-wise distribution of Reviewed studies

2.5.4. Year-Wise Distribution of the Reviewed Studies

The analysis of the publication years of the 128 sources, as depicted in figure 2.4., reveals that the number of pertinent studies published in the periods 2000-2004, 2005-2009, 2010-

2014, 2015-2019, and 2020-2024 were 1 (1%), 2 (2%), 23 (18%), 55 (43%), and 47 (37%), respectively. The year-wise distribution of these studies is shown in figure 2.5.

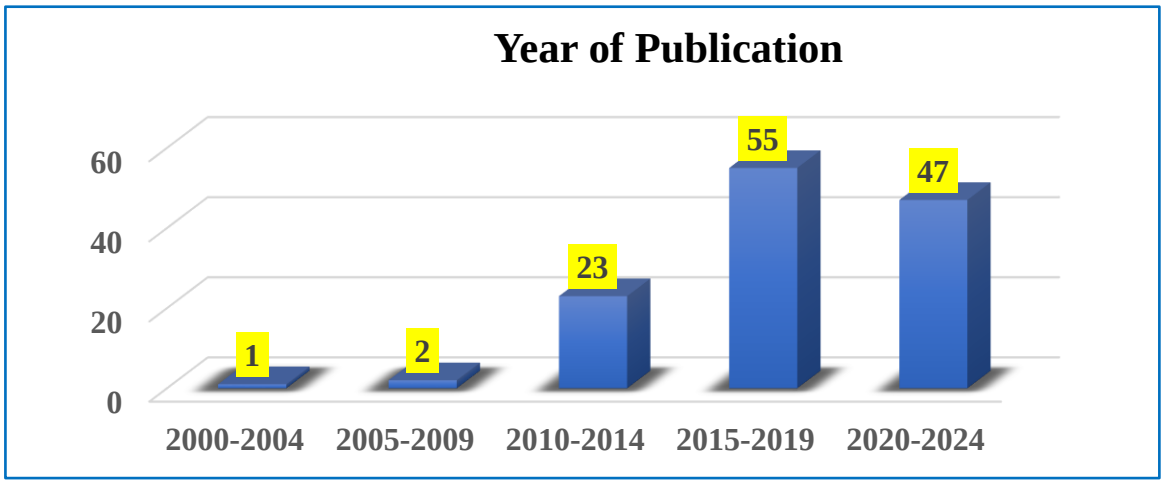

Figure 2.5. Year-wise distribution of the reviewed studies

The research trend reveals that few studies were completed before 2009; however, from 2010 forward, there has been a consistent rise. Between 2015 and 2019, a substantial number of studies- 55, representing 43% globally—were conducted. This indicates a burgeoning interest in the topic, underscoring its escalating significance and possible worth in contemporary research. This field of inquiry seems exceptionally promising.

CHAPTER-III

PROBLEM STATEMENT

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PROBLEM STATEMENT

3.1.0. Introduction

This chapter provides the context for the present study. The primary purpose of this chapter is to define the research problem, justify the need for the study, and establish its direction. This chapter builds on the previous chapter. This chapter sets the stage for the following chapter, which details the specific methodology of the research. In particular, this chapter highlights the researcher's positionality, the rationale behind the study, the statement of the problem, the operational definition of key terms, research objectives, hypotheses, delimitations, and the conceptual framework guiding the study.

3.2.0. Assumptions, Background, and Positionality of the Researcher in the Study

The researcher has six years of teaching experience in a B.Ed. College and works as an assistant professor at Indira Gandhi Memorial B.Ed. College in West Bengal. Throughout this time, he has faced various problems related to workload, self-efficacy and teacher effectiveness. To begin with, firstly, I have been a student of B.Ed., a foundational course for pedagogical teaching methods. Secondly, I have been working as a facilitator for providing teaching lessons and curriculum designs to aspiring teachers. Thirdly, the uncertainty of the private sector, job insecurity, and occupational hazards are major reasons for choosing this area for my research. Through my paper, I aim to support my fellow community members consisting of teachers and facilitators especially in school education.

3.3.0. Rationale of the Study

Teachers are essential in forming society's moral and intellectual foundations, especially as they significantly impact the next generation of professionals and citizens through quality teaching (Darling-Hammond, 2000; Hargreaves, 2003). This quality teaching relates to teacher effectiveness. Teacher effectiveness refers to a teacher's ability to enhance student learning outcomes, encompassing academic achievement, critical thinking, and holistic development. It is essential for quality education and societal advancement (Day et al., 2007; Hattie, 2009). Effective teaching positively impacts students' academic performance, personal growth, and social development (Scheerens,

2010). However, various internal and external factors, such as workload and self-efficacy, directly or indirectly influence teacher effectiveness. Workload refers to teachers' tasks and responsibilities, including teaching, lesson planning, assessment, administrative duties, and extracurricular activities (Borg & Riding, 1991). Workload plays a crucial role in determining a teacher's effectiveness. Workload significantly influences teacher effectiveness. Balanced workloads support high-quality instruction, innovative practices, and meaningful student engagement. Conversely, excessive workloads lead to fatigue, reduced motivation, and diminished teaching quality, adversely affecting student outcomes (Hakanen et al., 2006). The other factor that influences TE is SE. Self-efficacy refers to an individual's self-confidence to perform tasks and achieve goals successfully. In the context of teaching, teacher self-efficacy is the belief teachers have in influencing student learning and overcoming challenges in the classroom (Bandura, 1997; Tschannen-Moran & Hoy, 2001). Self-efficacy is closely linked to teacher effectiveness. Teachers with strong self-efficacy are likelier to employ effective teaching strategies, remain engaged with students, and create a supportive learning environment. This confidence translates into improved student outcomes and higher teaching effectiveness. In contrast, low self-efficacy can lead to disengagement, poor classroom management, and lower overall effectiveness (Tschannen-Moran & Hoy, 2001; Hattie, 2009).

Teacher effectiveness is perilous to educational quality, influencing student outcomes and the overall learning environment. Teacher effectiveness is the combination of performance, competence, and the accomplishment of learning objectives. According to Lalchhandami and Lalnunfeli (2019), secondary school teachers have a high level of effectiveness. The results reported that most secondary school teachers exhibit moderate teacher effectiveness (Naik, 2024). Also, results revealed that emotional intelligence and personality traits significantly influence the teaching effectiveness of teachers (Anuodo, 2018), principals' leadership characteristics (Francis et al., 2020), teaching experience and teacher's qualifications (Onyekuru & Ibegbunam, 2013). The results revealed that the appointment's nature did not influence the effectiveness of tertiary teachers (Dogra & Singh, 2015). The results of this study indicated that there is a positive relationship between teacher effectiveness with personality, among personality with emotional intelligence and teacher effectiveness and emotional intelligence among secondary school teachers (Agarwal et al., 2021), emotional intelligence (Jha & Singh, 2012), general intelligence (Habib, 2018), socio-economic status (Malik, 2017), job satisfaction (Pareek & Kulshrestha, 2021), hardiness (Vats, 2019). The finding of this study reveals that a negative significant relationship exists between the teaching effectiveness of secondary school

teachers with work motivation (Bala & Bashir, 2016), teacher stress (Borkar, 2013), mental health problems (Dafare, 2021; Devi & Talukdar, 2018). The findings of this study show that there exists a significant relationship between teacher effectiveness and teaching aptitude of teachers (Mangalamma & Vardhini, 2017), mental health (Sethi, 2015), emotional intelligence (Singh, 2017; Yadav, 2016), quality of work life (Thakur & Garg, 2020). Further, findings showed no significant relationship between teacher effectiveness and organisational climate to their gender and type of school (Kaur, 2018). The findings showed low teaching effectiveness among prevocational subject teachers (Kiadese, 2011). According to Ahmad (2019), directly recruited teachers have better teacher effectiveness than promoted senior secondary school teachers. The results highlighted that teachers significant differences in teacher effectiveness in respect of gender, marital status, type of school, and teaching experience (Azad & Kuchy, 2021; Begum & Vaidharani, 2024; Bhat & Raju, 2019; Bhullar, 2019; Chauhan, 2016; Chauhan & Sharma, 2019; Nagaraju & Janakiramaiah, 2024; Raju & Vardhini, 2022; Sivasakthi & Muthumanickam, 2012; Venkatesh, 2015), trained and untrained secondary school teachers (Barkat, 2021), Govt.-aided and Self-Financed B.Ed college teacher educators (Barman et al., 2015), pre-service teacher education training and stream of education (Bhat, 2017), graduate and post-graduate secondary teachers (Bhat & Arumugam, 2020), locality, class handled and academic streams (Biswas, 2017; Dash & Barman, 2016; Pachaiyappan & Raj, 2014; Pathak & Saxena, 2020; Rani & Devi, 2015), upper primary level school teachers (Brintha & Kumar, 2019), type of school management (Mangalamma & Vardhini, 2017). The findings indicated that there was no significant difference in teacher effectiveness in respect of locality of school (Azad & Kuchy, 2021; Chauhan, 2016; Dash & Barman, 2016; Vats, 2019), gender (Bhat, 2017; Biswas, 2017; Chauhan, 2016; Chauhan & Sharma, 2019; Dogra & Singh, 2015; Geetah, 2010; Jha & Singh, 2012; Habib, 2018; Kalita & Saha, 2013; Kori, 2023; Naik, 2024; Pachaiyappan & Raj, 2014; Pareek & Kulshrestha, 2021; Pathak & Saxena, 2020; Rani & Devi, 2015; Sehjal et al., 2021; Sen, 2017; Seth & Pandey, 2024; Singh & Attri, 2020; Toor, 2014), marital status, age and teaching experience (Bhat & Arumugam, 2020; Dutta, 2019; Kumar & Kumar, 2015; Sivasakthi & Muthumanickam, 2012; Tyagi, 2013; Uddin & Das, 2020), sex, type of school and teaching experience (Jain, 2017; Raju & Vardhini, 2022; Ritu & Singh, 2012; Sadhukhan, 2018; Sethi, 2015; Zaidi et al., 2022), sense of humour (Jitender & Sarkar, 2019), in-service and pre-service (Halder & Chal, 2020), gender and locality of school (Kumari & Chahal, 2017; Lalchhandami & Lalnunfeli, 2019; Rahaman & Rahaman, 2018), headmaster and teacher towards

knowledge of the subject matter, etc. and teachers' characteristics (Lushai & Fanai, 2019), caste categories and service streams (Nigam, 2018; Patel, 2015; Sadhukhan, 2018).

They are essential to the educational process since their efficacy in the classroom directly impacts the standard of instruction. The teaching profession, recognised as one of the most impactful careers in shaping future generations, is also marked by significant challenges, including heavy workloads. Understanding how workload affects teacher's self-efficacy and classroom practices is crucial for improving educational outcomes. However, some studies were found in this area. Research evidence highlights the profound impact of workload on various aspects of teachers' professional and personal lives. Studies have shown that workload strongly correlates with job satisfaction (Gull & Akhtar, 2014; Njuguna et al., 2022), occupational stress (Waweru & Ndambuki, 2021), and teacher burnout (Raman & Othman, 2017; Shah et al., 2024). It also influences educators' well-being (Wahab et al., 2024), emotional exhaustion (Werang, 2018), and job satisfaction (Cayupe, 2023).

The idea of teacher self-efficacy, a belief in one's ability to carry out educational activities successfully, greatly influences teachers' behaviours and students' outcomes. Teacher self-efficacy has emerged as a critical determinant of teaching effectiveness, influencing various aspects of educational practice and outcomes. Teacher self-efficacy significantly influences teaching practices, student motivation, and achievement (Alibakhshi et al., 2020). Self-efficacy is linked to better instructional strategies, classroom management, and student engagement, with rural teachers often demonstrating higher efficacy than their urban counterparts (Boateng, 2024). Self-efficacy also plays a crucial role in inclusive and special education, where teachers are more competent in handling diverse learning needs and disruptive behaviours (Woodcock et al., 2022; Kazanopoulos et al., 2022). Self-efficacy correlates positively with job satisfaction, teaching strategies, and professional commitment (Karabiyik & Korumaz, 2013; Ramakrishnan & Salleh, 2018; Skaalvik & Skaalvik, 2009). However, demographic factors such as gender, teaching experience, and school management type have been shown to influence self-efficacy levels, while qualifications and stream of education appear less significant (Chandrika, 2022; Sarkar & Roy, 2024).

Workload is a perilous factor influencing teacher effectiveness, as it directly impacts teachers' ability to manage their responsibilities and deliver quality education. The influence of workload on teacher effectiveness is also of considerable interest. Some researchers found that stress from too much work did not significantly affect seven aspects of how well teachers do their jobs. These included how they present lessons, run their

classrooms, get student feedback (Amalu, 2013), and how efficiently they teach (Barrios et al., 2022). Also, results reported that teacher workload significantly influenced student academic achievement and teacher effectiveness (Kanwal et al., 2023; Nuwaha, 2023). Magalong and Torreon (2021) found no significant relationship between teachers' workload management, well-being, and teaching effectiveness.

Teachers' workload and self-efficacy are two important things that affect how well they do in the classroom. Teachers' workload includes planning lessons, marking, paperwork, and continuing their education. A teacher's motivation, teaching methods, and overall effectiveness significantly affect their self-efficacy or belief in their ability to do specific teaching tasks well. Belizario et al. (2024) found that teachers' professional self-efficacy is hurt by how much work they think they must do. This makes them less confident and less booming. According to Herrera et al. (2022), university teachers' professional self-efficacy was affected by their workload and how they handled lessons online. Self-efficacy did not modify the effect of stress on burnout, though (Dewi et al., 2024; Szabo et al., 2021). Additionally, noteworthy connections were found between self-efficacy, job happiness, burnout, and workload (Dewi et al., 2024; Szabo et al., 2021); according to Eee et al. (2022), teachers who had much work to do probably had high levels of self-efficacy and mental health problems.

Self-efficacy is a critical factor in the development of teacher effectiveness, as it affects their psychological well-being, overall job satisfaction, and teaching practices. Numerous investigations have examined the relationship between teacher effectiveness and self-efficacy. Research indicates that educators who experience greater job satisfaction, contribute to a positive classroom environment, and exhibit effective teaching practices are more likely to have higher levels of self-efficacy (Raju & Vardhini, 2020; Sehgal et al., 2016; Paschal & Srivastava, 2021; Thapliyal & Joshi, 2023). Additionally, emotional intelligence is positively correlated with self-efficacy, which helps instructors establish student relationships and manage classroom dynamics (Adeyemo & Chukwudi, 2014; Klassen & Tze, 2014). Furthermore, research indicates that spiritual intelligence is essential for the improvement of self-efficacy and the effectiveness of teachers, particularly in the context of secondary school teachers (Singh, 2024). Haider and Mushtaq (2017) reported that teaching effectiveness is associated with servant leadership through the mediating effect of self-efficacy.

Based on the above discussion, along with an extensive integrative literature review of 128 studies (Chapter- II) and trend analysis, it is evident that there is an increasing interest in the areas of research on workload, self-efficacy (SE), and teacher effectiveness (TE),

particularly from 2010 to 2024. It becomes apparent that these areas persist as productive grounds for more scholarly investigation despite many studies focusing on workload, SE, and TE. Studies that specifically concentrate on workload were found in diverse fields like work satisfaction, supervisors, teachers experience, stress, work-life balance, work environment, well-being, occupational stress, individual characteristics, school climate, self-efficacy, life satisfaction, mental health problems, lesson demonstration, use of instructional supports, assessment of students, learning motivation, classroom management, supervision of co-curricular activities, and personal/professional qualities, teaching efficiency, student academic achievement, etc. Concerning TE, the distribution of studies across domains showed a significant emphasis on the significance of TE. Diverse fields such as teaching efficacy, personality attributes, gender, lesson planning, and classroom management contain studies explicitly focusing on TE. Studies on TE link variables such as leadership abilities, emotional intelligence, and personality traits like extroversion to enhance teaching performance. However, other factors, including gender, marital status, school type, and teaching experience, considerably affect teacher effectiveness. However, only a few studies have examined the individual impacts and influences of demographic factors on teacher effectiveness. Various studies on SE relate to variables such as engaging students, managing classrooms, and employing various instructional tactics. Some studies have found that SE is related to variables like emotional health and job satisfaction, classroom management, teaching strategies, classroom instructions, burnout, professional commitment, etc. Some studies were found that explore the relationship between workload and self-efficacy. Few studies were found exploring the relationship between workload and teacher effectiveness. Numerous investigations have also examined the relationship between teacher effectiveness and self-efficacy. However, only a few studies have independently measured the impacts and influence of demographic factors on workload, SE, and TE among school teachers. Most studies were done abroad, some in India, but none in West Bengal.

It is also observed that though several studies were conducted on workload, SE, and TE among secondary-level school teachers separately or on the relationship between the two, rarely any comprehensive attempt had been taken to explore the relationship between workload, SE, and TE among secondary-level school teachers. No studies have examined the direct, indirect, and total effects of workload and SE on TE among secondary-level school teachers. Earlier studies have not explored the mediating effects of SE between workload and TE.

Based on the above discussion and the researcher's own experience, the following questions arose in the research mind:

1. What are the prevalence rates of workload, self-efficacy, and teacher effectiveness among secondary-level school teachers of West Bengal?
2. Are there any demographic and professional factors that can significantly influence workload, self-efficacy, and teacher effectiveness among school teachers?
3. Is there any relationship between workload, self-efficacy, and teacher effectiveness among school teachers?
4. How do workload and self-efficacy affect teacher effectiveness among school teachers?
5. Are there any effects of workload on self-efficacy and teacher effectiveness among school teachers in West Bengal?
6. Does self-efficacy mediate the effects of workload on the effectiveness of school teachers?

To answer the above question, a comprehensive investigation is necessary to explore the relationship between workload, self-efficacy and teacher effectiveness among school teachers while considering various demographic and professional factors.

3.4.0. Statement of the Problem

Considering the comprehensive literature review, research trends, the rationale, the identified research gaps, and the above-raised questions, the problem for the present study can be stated as **"Workload, Self-Efficacy and Teacher Effectiveness among Secondary Level School Teachers".**

3.5.0. Operational Definition of the Major Terms Used

Secondary-Level School Teachers: In India, a secondary-level school refers to an educational institution that delivers education to students of classes VI-XII under different boards. The teachers who teach in these schools are considered secondary-level school teachers. They are permanent teachers as well as part-time teachers. In the present study, secondary-level school teachers refer to the permanent teachers who teach in these schools affiliated with WBBSE/WBCHSE and CBSE.

Workload: Workload refers to the total time of work and responsibilities that a teacher is required to achieve within a specified period, including teaching hours, lesson planning, grading, administrative duties, extracurricular activities, and other professional

responsibilities (Kyriacou, 2001). In the present study, workload refers to the combination of three measures: the number of classes needed to take per week, the additional responsibilities like head teacher, mid-day-meal, etc, teachers must manage and the number of subjects they need to teach.

Self-Efficacy (SE): Self-efficacy means an individual's confidence in their capacity to succeed, which helps create complete conclusions throughout inspiring conditions and can lower total stress levels. Generally, self-efficacy refers to a person's belief in their capability to execute tasks required to accomplish goals (Bandura, 1986). In the present study, self-efficacy is defined as self-confidence, efficacy expectation, positive attitude, and outcome expectation, as identified by Singh and Narain (2014) and Alam (2023).

***Self-Confidence**:* Self-confidence refers to an individual's belief in their abilities, judgement, and capacity to succeed in various tasks or situations.

Efficacy Expectation: Efficacy expectation refers to an individual's confidence to perform a task or achieve a desired outcome based on their capabilities.

Positive Attitude: A positive attitude refers to a positive outlook and a constructive way of responding to challenges, opportunities, and situations in life.

***Outcome Expectation**:* Outcome expectation refers to an individual's beliefs about the likelihood of specific consequences or outcomes resulting from performing particular actions or behaviours.

Teacher Effectiveness (TE): Teacher effectiveness refers to the behavioural outcomes of classroom performance, reflecting the knowledge, skills, and personal qualities essential for effective teaching. Its outcomes are from the interaction between the teacher, students, colleagues, parents, and other contextual factors (Gandhi, 2020). In the present study, Teacher effectiveness is considered in terms of personal qualities, classroom management skills, instructional planning and implementation, interpersonal relations (students, colleagues, and parents), professional skills, and digital skills.

Personal Qualities: It refers to a teacher who is empathetic, creative, energetic, emotionally intelligent, and has healthy relationships with students (Gandhi, 2020).

Instructional Planning and Implementation: Teachers' ability to plan instruction, stimulate students' higher teaching skills, and apply various assessment strategies to engage students in the classroom (Gandhi, 2020).

Classroom Organisation and Management: the ability of a teacher to organise and manage classroom resources and interactions to evaluate students' actions and provide positive feedback to reinforce a positive environment in the classroom, which maximises opportunities and motivation to learn (Gandhi, 2020).

Interpersonal Relations (Students, Colleagues, and Parents): The ability of a teacher to maintain cordial relationships with colleagues, students, and community members (Gandhi, 2020).

Professional Skills*:* A teacher's Micro behaviours, which set clear expectations and parameters, provide the necessary support to students who exhibit behaviours in the classroom (Gandhi, 2020).

Digital Skills*:* Teachers' knowledge of information communication technologies, techno-pedagogy, and the ability to use and handle various innovative digital tools within the teaching-learning process (Gandhi, 2020).

3.6.0. Objectives of the Study

The present research was undertaken to meet the following objectives:

1. To measure the prevalence rate of workload among secondary-level school teachers.
2. To investigate the influence of demographic factors (age, gender, present residence, marital status, locality of school, school board, school category, and medium of instruction) on workload among secondary-level school teachers.
3. To investigate the influence of professional factors (highest educational qualification, stream of education, teaching experience, ICT orientation, and any other professional course) on workload among secondary-level school teachers.
4. To assess the prevalence rate of self-efficacy among secondary-level school teachers.
5. To examine the influence of demographic factors on self-efficacy (overall and dimensions-wise) among secondary-level school teachers.
6. To examine the influence of professional factors on self-efficacy (overall and dimensions-wise) among secondary-level school teachers.
7. To measure the prevalence rate of teacher effectiveness among secondary-level school teachers.
8. To examine the influence of demographic factors on teacher effectiveness (overall and dimensions-wise) among secondary-level school teachers.
9. To examine the influence of professional factors on teacher effectiveness (overall and dimensions-wise) among secondary-level school teachers.
10. To assess the relationship between workload, self-efficacy, and teacher effectiveness among secondary-level school teachers.

11. To determine the mediating effects of self-efficacy in the relationship between workload and teacher effectiveness among secondary-level school teachers.

    11.1. To measure the direct effect of workload on self-efficacy among secondary-level school teachers.

    11.2. To measure the direct effect of self-efficacy on teacher effectiveness among secondary-level school teachers.

    11.3. To measure the direct effect of workload on teacher effectiveness among secondary-level school teachers.

    11.4. To measure the indirect effect of workload through self-efficacy on teacher effectiveness among secondary-level school teachers.

3.7.0. Hypotheses of the Study

In keeping with the problem formulated and objectives stated, the following hypotheses were proposed to be tested:

- $H_0$1: There is no significant variation in workload among secondary-level school teachers concerning their demographic factors (age, gender, present residence, marital status, locality of school, school board, school category, and medium of instruction).
- $H_0$2: There is no significant variation in workload among secondary-level school teachers concerning their professional factors (highest educational qualification, stream of education, teaching experience, ICT orientation, and any other professional course).
- $H_0$3: There is no significant variation in self-efficacy (overall and dimensions-wise) among secondary-level school teachers concerning their demographic factors.
- $H_0$4: There is no significant variation in self-efficacy (overall and dimensions-wise) among secondary-level school teachers concerning their professional factors.
- $H_0$5: There is no significant variation in teacher effectiveness (overall and dimensions-wise) among secondary-level school teachers concerning their demographic factors.
- $H_0$6: There is no significant variation in teacher effectiveness (overall and dimensions wise) among secondary-level school teachers concerning their professional factors.
- $H_0$7: There is no significant relationship between workload, self-efficacy, and teacher effectiveness among secondary-level school teachers.

- $H_0$8: Self-efficacy of secondary-level school teachers does not significantly mediate the relationship between their workload and teacher effectiveness.
- $H_0$9: There is no significant direct effect of workload on self-efficacy among secondary-level school teachers.
- $H_0$10: There is no significant direct effect of self-efficacy on teacher effectiveness among secondary-level school teachers.
- $H_0$11: There is no significant direct effect of workload on teacher effectiveness among secondary-level school teachers.
- $H_0$12: Workload among secondary-level school teachers does not indirectly affect their teacher effectiveness through self-efficacy.

3.8.0. Delimitations of the Study

Keeping in mind the specific study objectives, time and resource constraints, and various other factors, the present study was delimited to the following areas-

1. The study was delimited to five districts of West Bengal: Kolkata, Howrah, Hooghly, North 24 Parganas, and South 24 Parganas.
2. The study only includes full-time secondary-level school teachers.
3. A total of 644 secondary-level school teachers were included in the present study.
4. A total number of 25 schools were included, 15 schools from the West Bengal Board of Secondary Education (W.B.B.S.E.), the West Bengal Council of Higher Secondary Education (W.B.C.H.S.E.), and 10 schools from the Central Board of Secondary Education (CBSE).
5. The study was delimited to the following demographic variables, viz. age, gender, present residence, marital status, locality of the school, board of the school, category of the school, medium of instruction and professional variables, viz. highest educational qualification, stream of education, teaching experience, ICT orientation, and completion of any other professional course apart from D.El.Ed., B.Ed. or M.Ed.
6. In the present study, the workload was considered both a dependent and independent variable, and self-efficacy was considered a dependent, independent and mediating variable.
7. In the present study, teacher effectiveness was considered a dependent variable.
8. The self-efficacy scale of Singh and Narain (2014) was used to measure the self-efficacy of secondary-level school teachers.

9. The teacher effectiveness scale of Gandhi (2020) was used to measure the teacher effectiveness of secondary-level school teachers.
10. Only the English version of the questionnaires was administered to collect data from the representatives.

3.9.0. Significance of the Study

This study is crucial in education and related fields because it examines how workload, self-efficacy, and teacher effectiveness relate to secondary-level school teachers. The researcher fills in a significant research gap in the field. Focusing on a specific educational context seeks to understand teacher effectiveness influenced by workload and self-efficacy. The study's results can contribute to the field of education in many ways. The research provides perceptions of the workload, self-efficacy, and teacher effectiveness among secondary-level school teachers and investigates how various demographic and professional factors influence them. By investigating the factors contributing to teachers' workloads, this study can deliver evidence-based references for designing policies that decrease needless administrative loads and help teachers pay more attention to teaching and student engagement. The findings help understand how workload and self-efficacy influence teacher effectiveness and provide insights into improving teaching practices and developing a more creative learning environment. The study profoundly examines how demographic and professional factors like age, gender, experience, and educational background affect workload and self-efficacy. It does this by looking at these factors in different ways. The study's results on the relationship between workload, self-efficacy, and teacher effectiveness show ways to help secondary school teachers improve their self-efficacy and effectiveness as teachers. By analysing the mediation effects of self-efficacy, the study sheds light on how these variables can influence the relationship between workload and teacher effectiveness among secondary school teachers, providing a holistic view of the teaching process. The insights gained can inform educational policymakers about the importance of handling teacher workload in a way that promotes high self-efficacy. Ultimately, this study seeks to create a deeper understanding of how workload and self-efficacy influence teacher effectiveness.

3.10.0. Conceptual Framework of the Study

Based on the theoretical and conceptual viewpoints previously mentioned in Chapter I, the researcher created a conceptual framework that graphically shows the interaction between workload, SE, TE, and demographic and professional characteristics among secondary-level school teachers. The conceptual framework for this research is as follows:

A. Variables:

1. **Independent Variables:** Demographic and Professional Factors.
2. **Both Independent and Dependent Variable:** Workload.
3. **Independent, Dependent and Mediating Variable:** Self-Efficacy.
4. **Dependent Variable:** Teacher Effectiveness.

B. Theoretical Links:

***HAY McBer Model of Teacher Effectiveness (2000)*:** Hay McBer's model offers a valuable perspective for understanding teacher effectiveness, emphasising that it arises from a combination of demographic and professional characteristics.

***Model of Teacher Effectiveness by Nitsaisook and Postleth (1986)*:** Examining teacher effectiveness through the PCP model deepens our understanding of how various factors relate to shaping teaching outcomes, providing valuable visions that can inform the development of professional training programs, guide educational policy decisions, and enhance classroom practices, all to improve teacher performance and promote student success.

***Differentiated Teacher Effectiveness Model by Campbell et al. (2004)*:** Considering the various contexts, student needs, achievement of learning goals, and the guiding principles of teaching provide a comprehensive lens for understanding the factors that influence teacher effectiveness across different educational settings.

Medley's (1982) teacher effectiveness model explains how teacher characteristics, instructional methods, student outcomes, and external factors are interrelated.

***Cheng and Tsui's Model of Levels of Teacher Effectiveness (1996)*:** To understand the multifaceted nature of teacher effectiveness, as they connect teacher performance and growth to broader institutional goals and individual teacher improvement.

***Robert Marzano's model (2007)*:** Marzano's model provides a structured approach to enhancing teacher effectiveness by focusing on clear goals, student engagement, effective practice, and responsive assessments.

***The Self-Efficacy Theory (SET) by Bandura (1986)*:** Emphasizes the central role of self-efficacy in shaping human motivation and behaviour, mainly how individuals' perceptions of their capabilities influence their activities and results.

C. Hypothesised Relationships:

Demographic and Professional Factors → Workload, SE and TE: Demographic and Professional factors may influence Workload, SE and TE.

Workload ⟷ SE ⟷ TE

Workload → SE: Workload is hypothesised to influence SE.

SE → TE: SE is hypothesised to influence TE.

Workload → TE: Workload is hypothesised to influence TE.

This conceptual framework provided a valuable understanding of the factors influencing workload, SE, and TE among secondary-level school teachers. Also, this conceptual framework carried an understanding of the correlation between workload, SE, and TE among secondary-level school teachers. The researcher aimed to thoroughly examine this study's complex interactions between significant variables and theoretical constructs. The framework directed the data collection, analysis, and interpretation processes, facilitating a comprehensive understanding of the phenomenon under study.

Based on the previous studies, it was conceptualised that workload directly and indirectly impacts teacher effectiveness. Therefore, it was hypothesised that workload directly impacts self-efficacy **[Path-a (model-1)]**. Self-efficacy directly impacts teacher effectiveness **[Path-b (model-2)]**. Workload directly impacts teacher effectiveness **[Path-c (model-3)]**, and finally, workload indirectly impacts teacher effectiveness through self-efficacy **[Path-c'(model-4)]**. The conceptual framework has been demonstrated below:

D. Visual Representation:

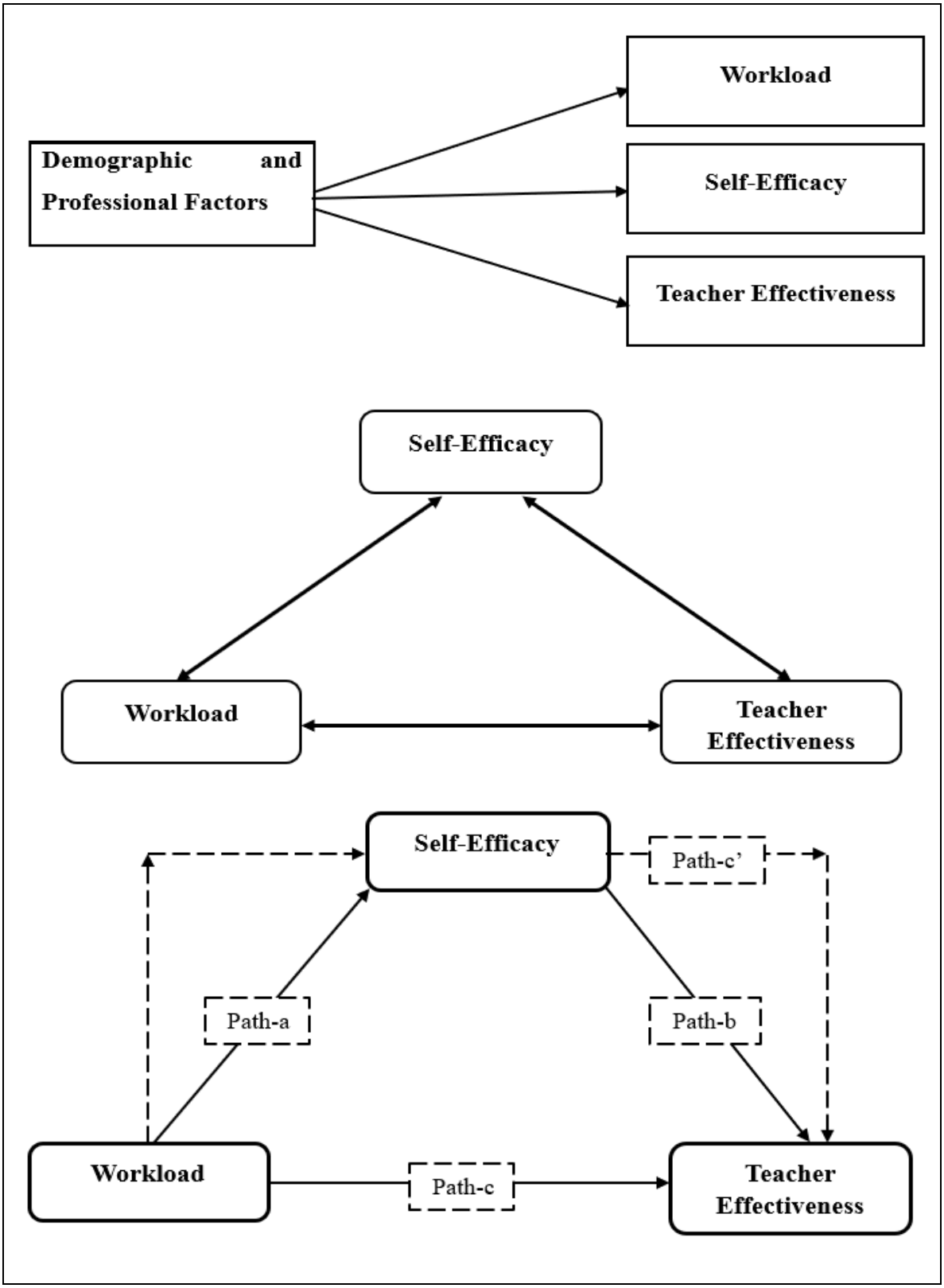


Figure 3.1. Conceptual Framework of the Study

CHAPTER-IV

METHODOLOGY OF THE STUDY

CHAPTER-IV
METHODOLOGY OF THE STUDY

4.1.0. Introduction

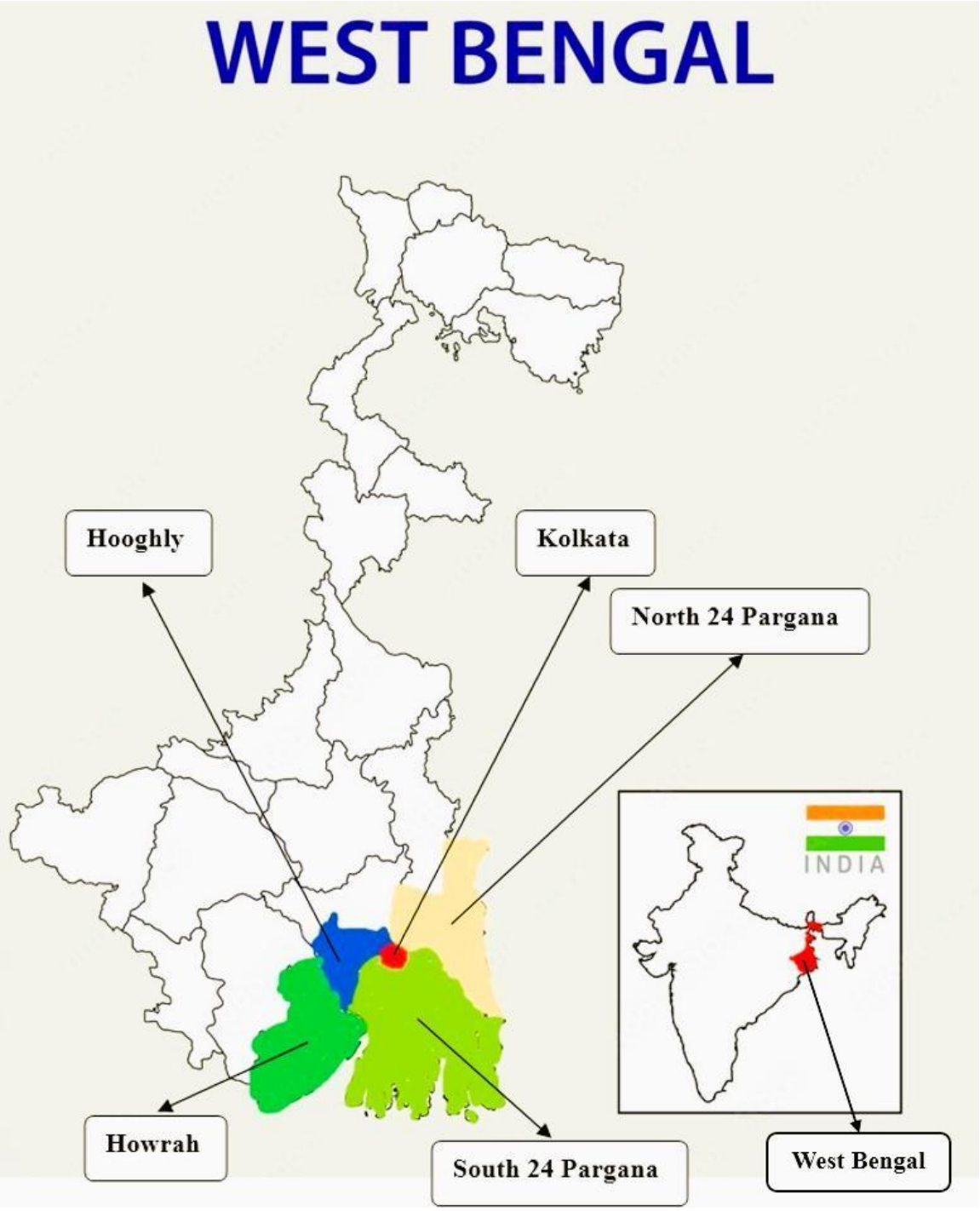
The research progress and quality depend on the methods used to do it (Sahu, 2013). A correctly chosen and used method could make the study results more reliable and consistent (Blackford, 2017). The main aim of this chapter is to describe the research design, locale of the study, participants of the study, description of the variables, method and procedure, tools and techniques of data collection and analysis, ethical considerations and analysis designs.

4.2.0. Research Design

In this study researcher followed a quantitative, descriptive approach with a cross-sectional design in this study. For this study, the researcher collected numerical data regarding the participant's workload and measured its relationship with self-efficacy and teacher effectiveness using statistical techniques. Quantitative research gathers and analyses numerical data and tries to establish relationships between variables through statistical techniques (Gay et al., 2019; Creswell, 2012). This study also delivers a description of participants' performance with the support of descriptive and inferential statistics without manipulating any variable. Descriptive research methodically explains current occurrences without changing variables (Atmowardoyo, 2018). This study successfully covers current trends, attitudes, and research methods while offering an accurate and thorough overview of the subjects (Kumar, 2018). Additionally, the present study compared groups within a population or the same group across different demographics and professional variables of interest using a cross-sectional survey design to measure and analyse the correlations across variables (Eltorai et al., 2023). By gathering information from a wide range of participants, cross-sectional research enables researchers to understand the whole population rather than just a particular group (Zheng, 2015). Cross-sectional research is frequently rapid and inexpensive to do (Wang & Cheng, 2020). After accounting for all of these pertinent factors, the researcher believes the above-mentioned designs would be best suitable for the current study. The research design is given in Figure 4.3. in the last section of this chapter.

4.3.0. Locale of the Study

The present study was conducted in five districts of West Bengal, India, namely: North 24 Parganas, South 24 Parganas, Kolkata, Howrah, and Hooghly. The researcher chose schools from Kolkata and the neighbourhood districts (North 24 Parganas, South 24 Parganas, Howrah, and Hooghly) because these districts constitute rural as well as urban areas and are located near to Kolkata metropolitan city. As per the census of 2011, the North 24 Parganas districts cover an area of 4,094 km². The district had a total population of 10,009,781. Most people work in information technology sectors, agriculture, fishing, different corporate offices, teaching, and other professions (Saradar & Hazra, 2015). As per the census of 2011, the South 24 Parganas districts covers an area of 9,960 km². The district had a total population of 81,61,961. It also has thriving industries, pisciculture, agriculture, teaching, and other professions (Bandyopadhyay & Basu, 2017). Similarly, as per the census of 2011, the Kolkata district covers an area of 185 km². The district had a total population of 4,486,679. Due to its historical significance and diverse population, it is a central financial, economic, and cultural hub in eastern India (Paul et al., 2014). The Howrah district covers an area of 1467 km². The district had a total population of 4,850,029 (Census of India, 2011). Most people work in information technology sectors, agriculture, as well as in different corporate offices, teaching and other professions (Maji & Halder, 2015). As per the census of 2011, the Howrah district covers an area of 3149 km². The district had a total population of 5.519,145. A district with a strong economy, Hooghly is known for its extensive agricultural, jute farming, manufacturing and teaching (Soumyabrata & Prasad, 2021). The researcher considered five schools from each district. Figure 4.1. shows the map that illustrates the location, where the study was conducted.



Source: https://www.surveyofindia.gov.in/pages/political-map-of-india

Figure 4.1. Geographical Location of the Study

4.4.0. Participants of the Study

4.4.1. Population

The present study focuses on secondary-level school teachers as the target population, encompassing five districts in West Bengal: North 24 Parganas, South 24 Parganas, Kolkata, Howrah, and Hooghly. The study includes data collected from government and private secondary school teachers. According to the Unified District Information System for Education (UDISE), there are approximately 420,000 teachers employed across government schools (WBBSE and WBCHSE), and private schools (CBSE and ICSE) in these districts. This total comprises an estimated 210,000 teachers in government schools, 80,000 in government-aided institutions, and 130,000 in private schools affiliated with CBSE and ICSE boards. For this research, 644 secondary-level school teachers were carefully selected to ensure a diverse cross-section of the population. The selection process was inclusive, with 164 teachers from North 24 Parganas, 140 from South 24 Parganas, 133 from Kolkata, 100 from Howrah, and 105 from Hooghly. This approach confirmed that the study's findings would be representative of the secondary-level school teacher population across the selected districts, enabling a comprehensive examination of the study's objectives.

4.4.2. Determination of Sample Size

In survey research, selecting an accurate sample representing the entire population is crucial for the study's success. Determining a proper sample size is a critical challenge for researchers to represent the population under investigation accurately. In this study, the researcher began by determining the required sample size and then selected individuals representative of the population. Calculating the sample size is essential for both known and unknown populations in survey research. The researcher initially applied Krejcie and Morgan's (1970) formula to determine the sample size, a widely recognised method. Based on established principles, this approach was adopted to ensure representativeness and minimise bias (Ezugu & Akimbo, 2014). For a finite population of 420,000, the formula indicated an approximate sample size of 384. Krejcie and Morgan's formula for determing sample size is given below. The researcher also employed the Raosoft sample size calculator to validate this calculation further. Using parameters such as a 5% margin of error, a 95% confidance interval, and a 50% assumed response rate (Aliyu et al., 2019; Ahmat et al., 2018), the calculator confirmed a sample size of 384 for the given population. The Raosoft tool was selected for its user-friendly interface and

ability to provide reliable and accurate results, ensuring robust sample size determination for the study.

$$S = X^2 NP (1 – P) / d^2 (N – 1) + X^2 P (1\text{-}P)$$

Where: S = sample size required

X = confidence level value of 1.96

N = population size of 420000

P = proportion of population size (assumed to be 0.50)

d = the degree of accuracy stated as a proportion (0.05)

$$S = (1.96)^2 420000*0.50 (1 – 0.50) / 0.05^2 (420000 – 1) + (1.96)^2 0.50 (1\text{-} 0.50)$$

$$S= 3.8416 * 210000 * 0.5 / 0.0025 *419999 + 3.8416 * 0.25$$

$$S= 403368 / 1049.9975 + 0.9604$$

$$S= 403368/ 1050.9579$$

$$S= 383.809856 \text{ or } 384 \text{ (Approximation)}$$

4.4.3. Sampling Procedure and Sample of the Study

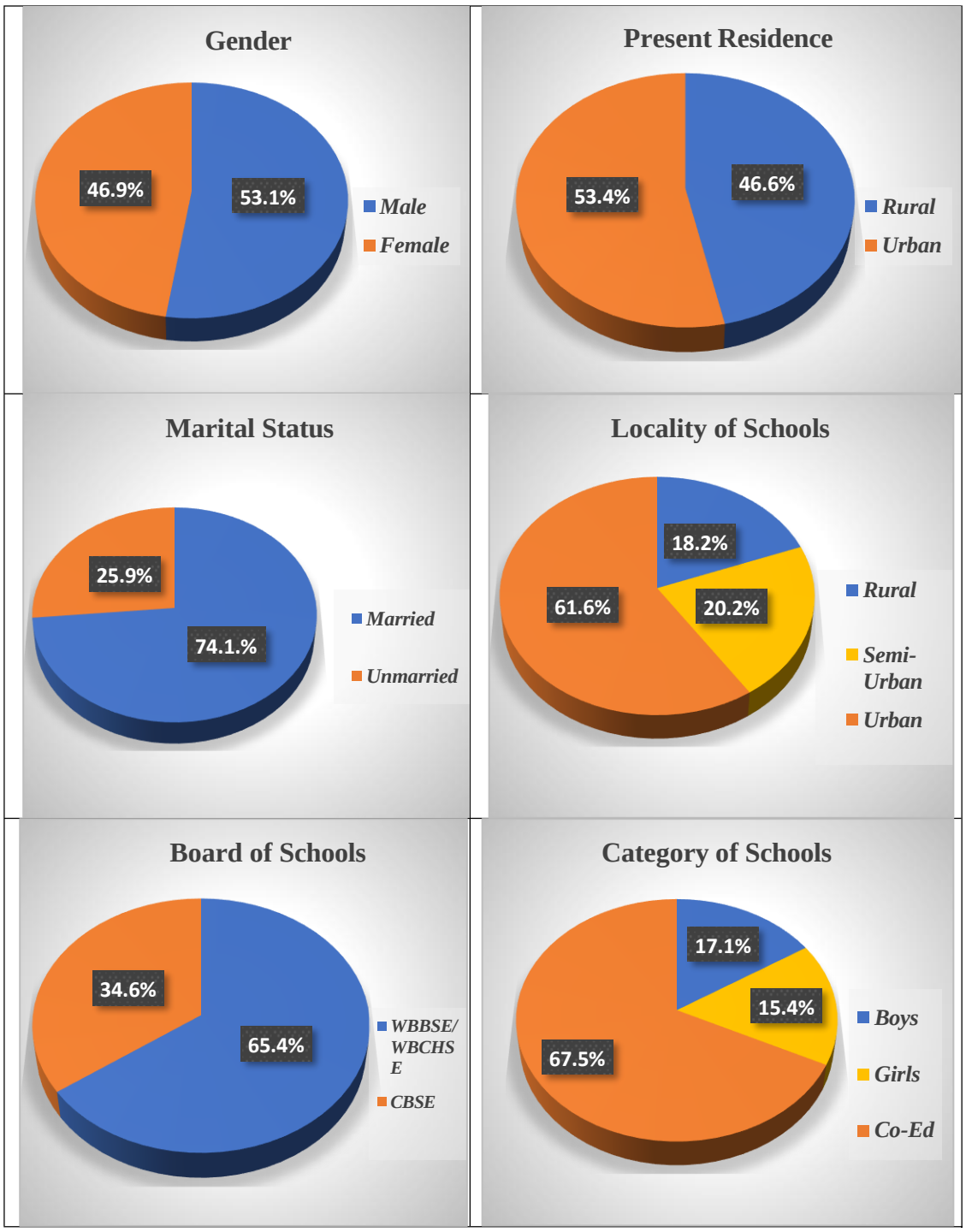
The researcher used purposive, convenient and random sampling techniques to select a sample for the present study. A purposive sample is one in which the characteristics of the participants are specifically defined to serve the purpose of the study (Andrade, 2021). Convenient sampling, or convenience sampling, is a non-probability sampling method in which participants are nominated based on their availability, accessibility, and willingness to participate (Etikan et al., 2016). On the other hand, the random sampling method ensures that each population unit has an equal probability of being selected, making it more representative (Jawale, 2021). As the present study was delimited to secondary-level school teachers, the researcher purposively selected the districts near to Kolkata metropolitan city. The researcher conveniently selected 25 secondary-level schools across five districts in West Bengal. further, the participants were selected randomly from secondary-level school teachers. The researcher visited each selected school to gather data from secondary-level school teachers. the final sample for this study is made up of 644 secondary-level school teachers. The study’s sampling frame is shown in the table and figure below.

Table 4.1. Final Sample of the Study

SL. No.	District	School Name	No. of Teachers
1	North 24 Parganas	Santinagar High School	46
		Belgharia High School	35
		Jatindas Vidyamandir	35
		Adamas World School	24
		Delhi Public Secondary School	24
2	South 24 Parganas	Sonarpur Vidyapith	32
		Balia Nafar Chandra Balika Vidyalaya	33
		Ghasiara Vidyapith	20
		Techno India Group Public School	27
		Narayana School	28
3	Kolkata	Jadavpur Vidyapith	46
		Jadavpur High School	27
		Kamala Girls High School	27
		South City Internation School	14
		Delhi Public School	19
4	Howrah	Amta Girls High School	17
		Khorop High School	26
		Garh Bhawanipur R.P Institution	18
		Ideal Public School	21
		South Point Institute	18
5	Hooghly	Magri Jatindranath Harijan High School	20
		Rahimpur Nabagram High School	19
		Telinipara Bhadreswar Girls High School	20
		Techno India Group Public School	26
		Techno India Group Public School	22
Total			**644**

Table 4.2. Demographic and Professional Profile of the Participants

Sl.No.	Variables	Categories	N	(%)	Total
1	Gender	Male	342	53.1	644
		Female	302	46.9	
3	Present Residence	Rural	300	46.6	644
		Urban	344	53.4	
4	Marital Status	Married	477	74.1	644
		Unmarried	167	25.9	
5	Locality of Schools	Rural	117	18.2	644
		Semi-Urban	130	20.2	
		Urban	397	61.6	
6	Board of Schools	WBBSE/WBCHSE	421	65.4	644
		CBSE	223	34.6	
7	Category of Schools	Boys	110	17.1	644
		Girls	99	15.4	
		Co-Ed	435	67.5	
8	Medium of Instruction	Bengali	322	50.0	644
		English	223	34.6	
		Bengali and English	99	15.4	
9	Highest Educational Qualification	Undergraduate (B. A, B.Sc. or B. Com)	113	17.5	644
		Postgraduate (M.A., M.Sc. or M. Com)	514	79.8	
		Postmasters (M.Phil. or Ph.D.)	17	2.6	
10	Stream of Education	Arts	345	53.6	644
		Science	261	40.5	
		Commerce	38	5.9	
11	ICT Orientation	Yes	389	60.4	644
		No	255	39.6	
12	Professional Course	Bachelor's Degree (B.Ed. or B. P. Ed.)	601	93.3	644
		Master's Degree (M.Ed. or M. P. Ed.)	43	6.7	


Gender
46.9%
53.1%
Male
Female
Present Residence
53.4%
46.6%
Rural
Urban
Marital Status
25.9%
74.1%
Married
Unmarried
Locality of Schools
18.2%
61.6%
20.2%
Rural
Semi-Urban
Urban
Board of Schools
34.6%
65.4%
WBBSE/ WBCHSE
CBSE
Category of Schools
17.1%
15.4%
67.5%
Boys
Girls
Co-Ed

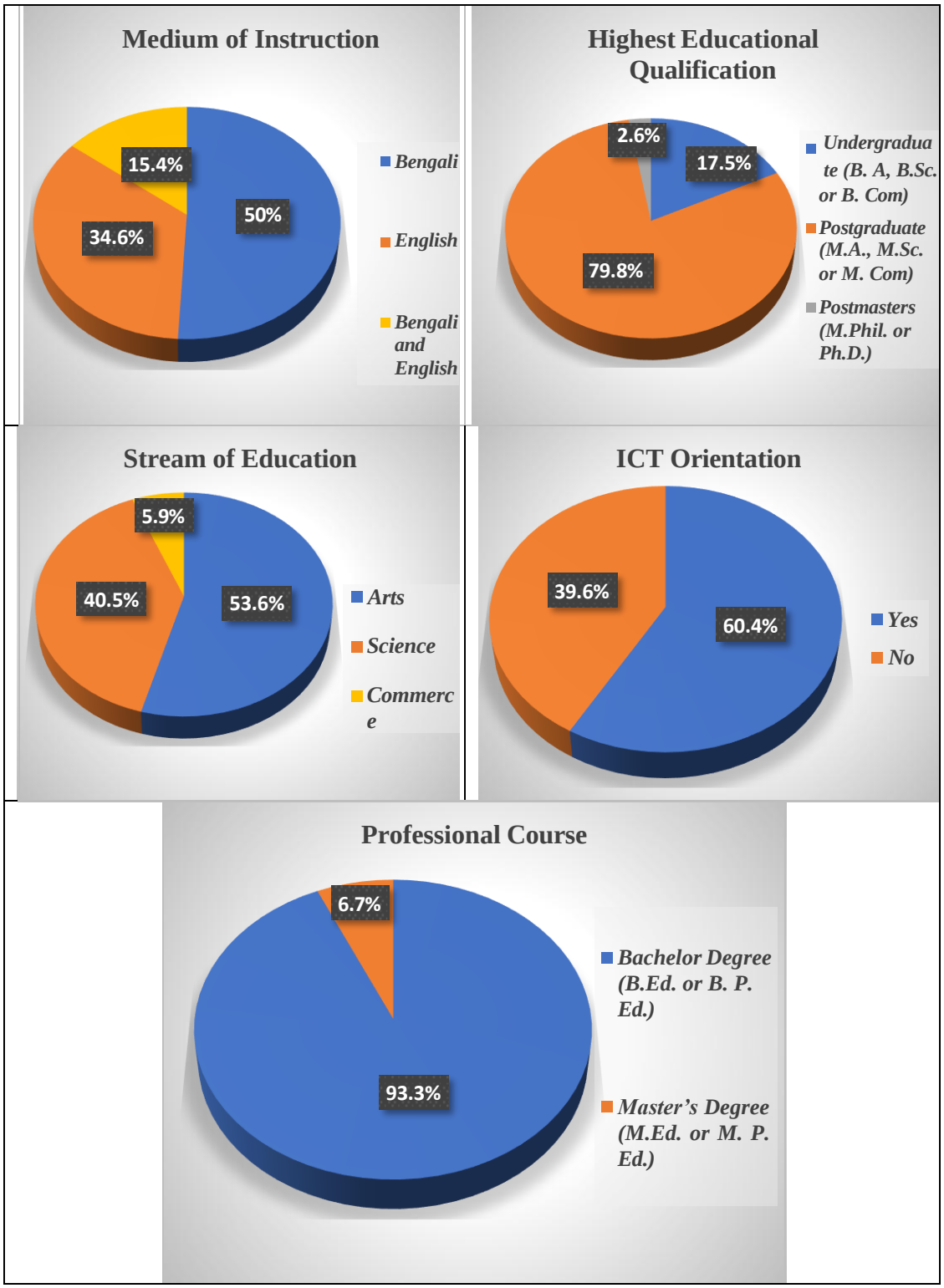


Figure 4.2. Demographic and Professional Profile of the Participants

4.5.0. Description of the Variables Under Consideration

A variable is any characteristic or feature that can change in value. It refers to an observable attribute that can assume multiple values or be classified into distinct categories (Lewis-Beck et al., 2003). Variables can be independent, dependent, mediating, or moderating, depending on their role in a research study (Bhattacherjee, 2012). Based on the hypothesis, variables are considered as independent variables (Age, Gender, Present Residence, Marital Status, Locality of School, Board of School, Category of School, Medium of Instruction, Highest Educational Qualification, Stream of Education, Teaching Experience, ICT orientation, Any other professional course other than D.El.Ed / B.Ed. / M.Ed.), truly dependent variables (Teacher Effectiveness), both dependent and independent variable (Workload), and dependent, independent, and mediating variable (Self-Efficacy).

4.5.1. Demographic and Professional Factors (Independent Variables)

The current study acknowledges that the demographic and professional variables are independent, influential factors that can impact the dependent variables. The researcher manipulates, measures, or selects these variables to understand their effect on dependent variables (Subramanian, 2022). The study specifically focuses on the following independent (demographic and professional) variables:

Demographics Variables: Age, Gender, Present Residence, Marital Status, Locality of School, Board of School, Category of School, and Medium of Instruction. These independent (Demographic) variables have been identified as part of the current study:

1. **Age:** This particular variable was continuous and measured in years.
2. **Gender:** This variable was characterised by categories and measured two labels: male and female.
3. **Present Residence:** This variable represents the participants' present place of residence, indicating where they live. The responses were classified into two categories: rural and urban areas.
4. **Marital Status:** This variable was categorical and had two labels: married and unmarried.
5. **Locality of Schools:** This variable provides information on whether the school is located in a rural or urban area.
6. **Board of Schools:** This variable identifies and provides details about the governing body or board responsible for the administration of the school's operations, namely W.B.B.S.E. or W.B.C.H.S.E. and CBSE.

7. **Category of Schools:** This variable represents the category of school, for example, the schools may be boys, girls, and co-ed schools.
8. **Medium of Instruction:** This variable specifies the language or medium of instruction delivering at the schools, three types of schools were included viz. Bengali, English and Bengali or English.

Professional Variables: The professional factors like- highest educational qualification, stream of education, teaching experience, ICT orientation, any other professional course other than D. El. Ed / B.Ed. / M.Ed. were considered as professional variables. These are also considered as independent (Professional) variables.

1. **Highest Educational Qualification:** it is categorical variable which includes different levels of education, viz. undergraduate (B.A., B.Sc., or B.Com.), postgraduate (M.A., M.Sc., or M.Com.), and postmasters (M.Phil. or Ph.D.).
2. **Stream of Education:** This variable categorical in nature and measured up to three labels, viz. arts, science, and commerce.
3. **Teaching Experience:** This variable represents total year of service experience of the participant in the present job, which was continuous in nature.
4. **ICT orientation:** This variable represents whether teachers had to do training or orientation in information and communication technology (ICT), with responses as Yes or No.
5. **Professional Courses:** it refers to any additional professional course's teachers pursue for example B.Ed. or B.P.Ed. and M.Ed. or M.P.Ed. in this study those courses were categorised as bachelor's degree levels (Ed. or B.P.Ed.) and master's degree levels (M.Ed. and M.P.Ed.).

4.5.2. Dependent Variables

In the present study, the researcher considered workload, self-efficacy and teacher effectiveness including their respective dimensions as the primary variable. Further, based on the role in this study, these variables were considered as well as dependent variables, both dependent and independent variable, and mediating variable.

1. **Workload:** It is a continuous variable and in the present study, it is considered as both dependent and independent variable.
2. **Self-Efficacy:** It is also a continuous variable, which comprise four (4) dimensions or subscales: self-confidence, efficacy expectation, positive attitude, and outcome expectation. In the present study, self-efficacy is treated as a dependent, independent and mediating variable.

3. **Teacher Effectiveness:** This variable is a continuous variable comprising six (6) distinct dimensions: personal qualities, classroom management skills, instructional planning and implementation, interpersonal relations (with students, colleagues, and parents), professional skills, and digital skills. In the present study treated teacher effectiveness as the main dependent variable.

4.6.0. Methods of Data Collection

4.6.1. Tools Used for Data Collection

Success any study depends on the quality of the data collected, which is influenced by the choice of appropriate research tools, which is reliable, valid, and suitable for the study's objectives. Choosing appropriate research tools is a crucial part of educational research, which may involve developing new tools or using pre-existing ones (Subramanian, 2022). In this study, the researcher employed three instruments: a demographic and professional profile sheet, a self-efficacy scale, and a teacher effectiveness scale.

4.6.1.1. Demographic and Professional Profile Sheet of the Participants

A self-developed demographic and professional profile sheet was utilised to collect and document participants' demographic and professional information. This included details such as age, gender, present residence, marital status, locality of schools, board of schools, category of schools, medium of instruction, highest educational qualification, stream of education, teaching experience, ICT orientation, completion of any professional courses other than D.El.Ed./B.Ed./M.Ed., the number of subjects taught, weekly teaching load, and additional responsibilities beyond regular school duties.

4.6.1.2. The Measure of Workload

The variable 'workload' is the composition of three measures, viz. class load per week, additional responsibilities and number of subjects taught. This information was collected through the demographic and professional profile sheet. Class load per week refers to the number of classes a teacher takes in six working days (Monday to Saturday) in a week. This number varied from five to thirty-six classes per week. Additional responsibilities refer to the duties or responsibilities other than teaching a teacher has to take. For example, the head of the institution, supervisor of a mid-day meal scheme or other government schemes. It was measured as whether they have additional responsibilities or

do not have. A score of one (1) was assigned to those with additional responsibilities, and a score of zero (0) was assigned to those who did not have additional responsibilities.

The number of subjects taught refers to how many subjects a teacher taught in the school. For example, a teacher may teach two social science subjects, history and geography. It was found that a secondary school teacher usually taught one to three or four subjects. As there was a massive variation in class-load measure, this measure was converted into a normalised measure using the formula= class-load minus maximum class-load divided by maximum class-load minus minimum class-load.

As the three measures have different importance, each measure was given weightage according to their importance. As the class load is the most important workload for school teachers, 60% weightage was given to this measure. Accordingly, 30% weightage was given to additional responsibilities, and 10% weightage was given to a number of the subjects taught. Finally, their weighted scores were summed up to get the workload score. There was no such possible score range, however a higher score indicates higher workload and vice versa.

Table 4.3. Description of Norms for the Level of Workload

	Range	**Level of Workload**
Workload	Up to 41.45	Low
	41.46 to 81.82	Average
	81.83 and above	High

4.6.1.3. The Self-Efficacy Scale

The Self-Efficacy Scale was developed by Singh and Narain (2014). This scale had 20 items, organised into four dimensions: self-confidence, efficacy expectation, positive attitude, and outcome expectation. The scale consists mainly of positive items but four negative items. This scale follows a five-point Likert-type format, and the response options are strongly disagree, disagree, undecide, agree, and strongly agree. Naturally, completing the entire scale takes approximately 10 to 15 minutes. The scoring process of the tool was straightforward. A response of strongly agree is given a score of 5, agree is given a 4 score, undecide is given a 3 score, disagree is given a 2 score, and strongly disagree is given a 1 score. For the four negative items, the scoring procedure is reversed. The possible score may range from 20 to 100, where a higher scores on the scale indicate higher self-efficacy, while lower scores indicate lower self-efficacy levels. The dimensions, their respective items, and the scoring procedure are given below.

Table 4.4. The Dimensions and their Respective Items and the Scoring Procedure for the Self-Efficacy Scale

SL.No.	Dimension of the Scale	Item No.	No. of Items
I	Self-Confidence	1, 2, 3, 4, 5,	5
II	Efficacy Expectation	6, 7, 8, 9, 10	5
III	Positive Attitude	11, 12, 13, 14, 15,	5
IV	Outcome Expectation	16, 17, 18, 19, 20	5
Self-Efficacy		Total	20

Scoring procedure for five responses					
	Strongly Agree	Agree	Undecided	Disagree	Strongly Disagree
Positive items	5	4	3	2	1
Negative items (4,10,12 and 18)	1	2	3	4	5

Table 4.5. Description of Norms for the Level of Self-Efficacy

Scale	Range	Level of Self-Efficacy
Self-Efficacy	Up to 84	Low
	85 to 95	Average
	96 and above	High

4.6.1.3.1. Technical Information about the Self-Efficacy Scale

Reliability: The original scale's reliability coefficient was 0.92. Previous researchers also applied this Self-Efficacy Scale and reported similar or higher reliability coefficients than the original study. In the present study researcher also conducted a pilot study on 552 representatives to ensure its reliability and usability. The researcher found the tool's split-half reliability of.549) and Chronbach's Alpha reliability of .748.

Validity: A test's validity is determined by how well it measures the characteristics for which it is designed. The concurrent validity of the original scale was 0.74. The same is considered in by the researcher. The details have been given in table 4.6.

Table 4.6. Reliability and Validity Coefficients for the Self-Efficacy Scale

Scale Version	Reliability	Concurrent Validity
Singh and Narain (2014)	0.92	0.74
Falki (2019) and Ahuja (2016)	0.82 (Test-retest), 0.74 (split-half)	0.92
Talluri (2019)	0.82 (Test-retest)	X
Alam (2023)	0.768 (Test-retest), 0.672 (split-half)	X
Pilot Study by the Researcher (N=552)	0.748 (Cronbach's α) 0.549 (split-half)	X

4.6.1.4. The Teacher Effectiveness Scale

The Teacher Effectiveness scale was developed by Gandhi (2020). The tool comprises 48 items, organized into six dimensions: personal qualities, classroom management skills, instructional planning and implementation, interpersonal relations (students, colleagues, and parents), professional skills, and digital skills. the scale consists of positive statements. this scale follows a five-point likert-type format and the response options are strongly disagree, disagree, undecided, agree, and strongly agree. Completing the entire scale takes approximately 15 to 20 minutes. The scoring procedure of the tool was very easy. A response of strongly agree is given a score of 5, agree is given a 4 score, undecided is given a 3 score, disagree is given a 2 score, and strongly disagree is given a 1 score. The possible score may range from 48 to 240. A higher score indicates a higher level of teacher effectiveness, while lower scores show a lower level of teacher effectiveness. The dimensions, their respective items, and the scoring procedure are given below.

Table 4.7. The Dimensions and their Respective Items and the Scoring Procedure for the Teacher Effectiveness Scale

Sl. No.	Dimension of the Scale	Serial-wise item No.	No. of Items
I	Personal Qualities	1, 2, 3, 4, 5, 6, 7, 8	8
II	Classroom Management Skills	9, 10, 11, 12, 13, 14, 15	7
III	Instructional Planning and Implementation	16, 17, 18, 19, 20, 21, 22, 23, 24, 25	10
IV	Interpersonal Relation	26, 27, 28, 29, 30, 31, 32, 33	8
V	Professional Skills	34, 35, 36, 37, 38, 39, 40, 41	8
VI	Digital Skills	42, 43, 44, 45, 46, 47, 48	7
Teacher Effectiveness		Total	48

Scoring procedure for five responses				
Strongly Agree	Agree	Undecided	Disagree	Strongly Disagree
5	4	3	2	1

Table 4.8. Description of Norms for the Level of Teacher Effectiveness

Scale	Range	Level of Teacher Effectiveness
Teacher Effectiveness	Up to 212	Low
	213 to 228	Average
	229 and above	High

4.6.1.4.1. Technical Information about the Teacher Effectiveness Scale

Reliability: The original scale's Cronbach's Alpha coefficient was 0.863 and split-half reliability coefficient was 0.82. Based on the pilot study on 552 representatives, the researcher found the split-half reliability of.865 and Chronbach's Alpha of .87.

Validity: Gandhi (2020) ensured the original scale's validity was 0.905. The considered this value for the present study. The details have been given in the table 4.9.

Table 4.9. Reliability and Validity Coefficients for the Teacher Effectiveness Scale

Scale version	Reliability	Concurrent Validity
The original version by Gandhi (2020)	0.863 (Cronbach's α) 0.827 (split-half)	0.905
Pilot Study by the Researcher (N=552)	0.87 (Cronbach's α) 0.865 (split-half)	X

4.6.2. Procedure of Data Collection

To collect the data, the researcher first met with all the school head teachers and informed them about his research topic. Then, the head teacher took the researcher to the staff room and introduced him to all the teachers. Following this, the researcher informed the teachers about his research topic and requested their assistance in providing accurate information required for the study. Upon obtaining their voluntary consent, participants were given a detailed consent letter, which they were asked to read thoroughly and sign. Subsequently, participants received questionnaires, including the consent form, a demographic and professional information sheet, a self-efficacy scale, and a teacher effectiveness scale, with specific instructions to read and respond to each item carefully. The next day, the researcher returned to the school to collect the questionnaires from the teachers. Data collection commenced following approval from the Research Advisory Committee (RAC) and the issuance of a bona fide letter from the research supervisor. Of the 800 participants approached, 692 returned questionnaires, yielding a high response rate. Data collection

spanned from August 1, 2023, to January 30, 2024, adhering strictly to ethical guidelines and ensuring high-quality data collection.

Table 4.10. Responses Collected

Districts	Provided Instruments	Received Responses	Finally Included
North 24 Parganas	190	168	167
South 24 Parganas	160	142	132
Kolkata	160	139	130
Howrah	150	118	100
Hooghly	140	125	115
Total	800	692	644

4.7.0. Storage and Protection of Data

4.7.1. Data Screening

After completing the survey, participant responses were sensibly reviewed to confirm that they completed the questionnaire. The screening process involved collecting responses, including completed consent and survey questions, while removing missing demographic or professional information. At this stage, 28 responses were excluded from mistakes and incomplete data.

4.7.2. Tabulation of Data

A methodical and orderly arrangement of data was completed to back further analysis and interpretation to make significant conclusions related to the study's objectives. The raw data from 644 secondary-level school teachers was carefully organised in an MS Excel datasheet. This systematised method of data tabulation is crucial for thoroughly examining the study's objectives and serves as a vital foundation for the following stages of analysis.

4.8.0. Data Analysis Techniques

The researcher securely accessed the MS Excel datasheet stored on his computer during the statistical analysis phase. To analyse the data effectively, he applied SPSS-20 software. First, the MS Excel datasheet was transferred to an SPSS data sheet. Then, various statistical analyses were made using the software, with guidance and support from

the research supervisor. This collaborative effort confirmed a thorough and accurate examination of the data for research purposes.

4.8.1. Data Normality

The researcher first checks the data's normality using Skewness and Kurtosis statistics, Kolmogorov-Smirnov and Shapiro-Wilk test. Next, outliers are also checked at this stage, and based on the result, 20 responses were removed.

4.8.2. Descriptive Data Analyses

The demographic and professional variables of the study are described using primary descriptive statistical techniques such as mean and standard deviation. Specific descriptive analyses included demographic variables such as age, gender, present residence, marital status, locality of schools, board of schools, category of schools, medium of instruction, highest educational qualification, stream of education, teaching experience, ICT orientation, any other professional course other than D. El. Ed / B.Ed. / M.Ed. Additionally, the prevalence rate of workload distribution, self-efficacy and teacher effectiveness are provided in Chapter V.

4.8.3. Parametric Analyses

Parametric statistics, a branch of inferential statistics, is utilised for hypothesis testing and drawing meaningful conclusions. It encompasses both descriptive and inferential statistical techniques. This study used parametric statistical methods to test hypotheses, including Pearson correlation, t-tests, and One-Way Analysis of Variance (ANOVA).

Specifically, Pearson correlation analysis examined the relationships between workload, self-efficacy and teacher effectiveness among secondary school teachers. Additionally, t-tests and ANOVA were conducted to determine whether significant differences occurred in the means of dependent variables across various demographic and professional factors. These analyses enabled the researcher to identify variations in independent variables, such as age, gender, and other demographic or professional characteristics, among secondary school teachers.

4.8.3.1. Parametric Assumptions

The normality assumptions for parametric data were evaluated using Skewness and Kurtosis statistics, adhering to acceptable ranges of ±2 and ±7, respectively, as suggested by Byrne et al. (2010) and Curran et al. (1996). Kline (2005) also proposed acceptable variations for Skewness and Kurtosis as ±3 and ±10. The Shapiro-Wilk test was applied

to measure data normality, with the expectation of non-significant results indicating normal distribution.

4.9.0. Assumptions, Limitations and Ethical Considerations

The assumptions, limitations, and ethical considerations to ensure the reliability of the study. It includes factors like input errors, information accuracy, and other obstacles that could impact the research's reliability. Additionally, relevant details are documented to aid future studies. Statistical assumptions related to correlation analysis and normal distribution are addressed in other sections, where correlation and statistical methods are explained.

4.9.1. Assumptions

One of the assumptions of this study was that participants would answer the survey questions truthfully, accurately, and cooperatively, correctly identifying themselves as secondary-level school teachers. It was also assumed that honesty and accuracy would help protect their personal information.

4.9.2. Limitations

The research was dependent on information provided by participants themselves. The researcher assumed that the participants' information was truthful and impartial. Furthermore, participants were only contacted during the study while it was ongoing.

4.9.3. Ethical Considerations

In conducting survey research, following the highest ethical standards is authoritative. The study's main objective was to enhance comprehension of the relationship between variables without asserting causation. Prior to engaging in the research, all communications with potential participants included transparently providing them with essential details, such as the study's purpose and topic of the study. This approach aimed to prevent any coercion or undue pressure on the participants. Also, before the research started, informed consent forms were distributed to participants for their signatures, ensuring compliance with the standards set by the Jadavpur University Research Advisory Committee (RAC) and the general scientific community. Throughout the study, the privacy and secrecy of participants were thoroughly maintained. No identifiable information was collected to protect participants' privacy. Additionally, careful attention was paid to ensuring accurate data input, minimising input errors and enhancing the study's reliability and applicability for making claims.

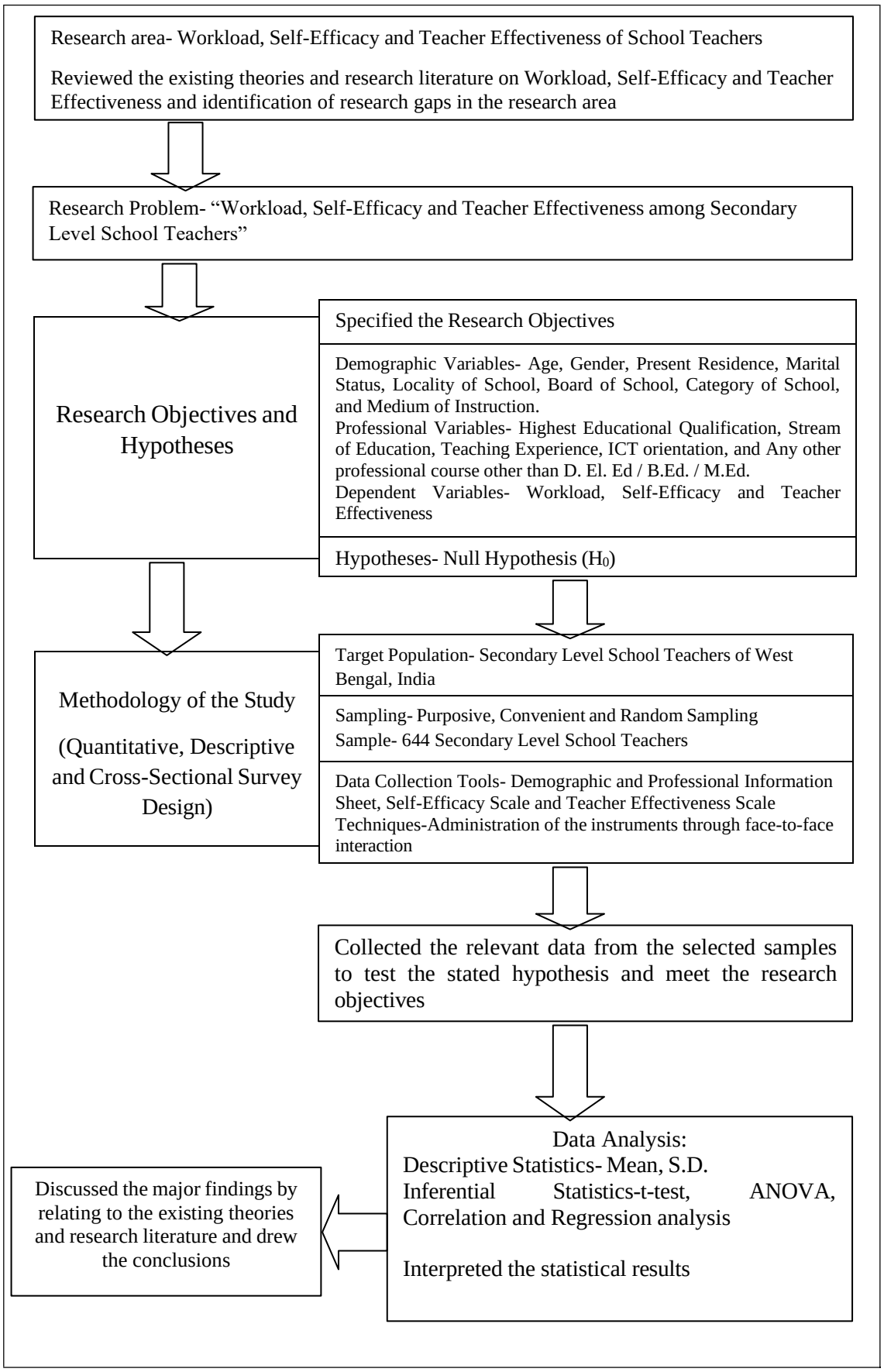


Figure 4.3. Research Design

4.10.0. Analysis Designs

4.10.1. Factorial Analysis Design Relating to Objective-1

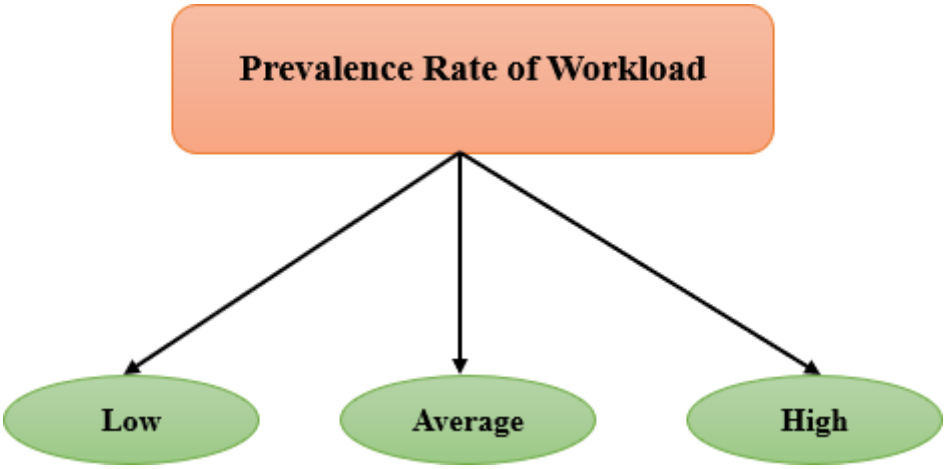


Figure 4.4. Prevalence Rate of Workload

4.10.2. Factorial Analysis Design Relating to Objective-2 and 3

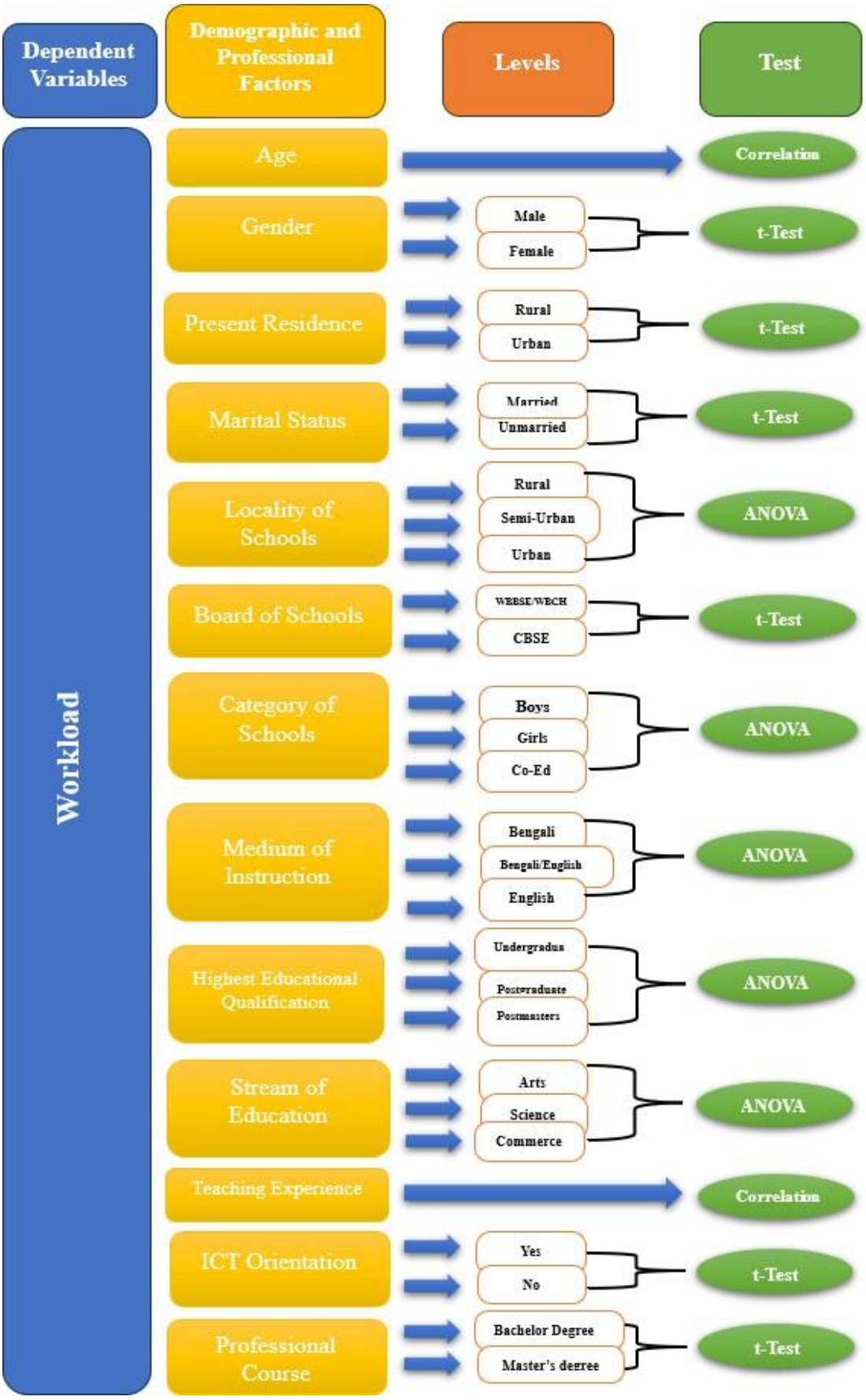


Figure 4.5. Influence of Demographic and Professional Factors on Workload

4.10.3. Factorial Analysis Design Relating to Objective-4

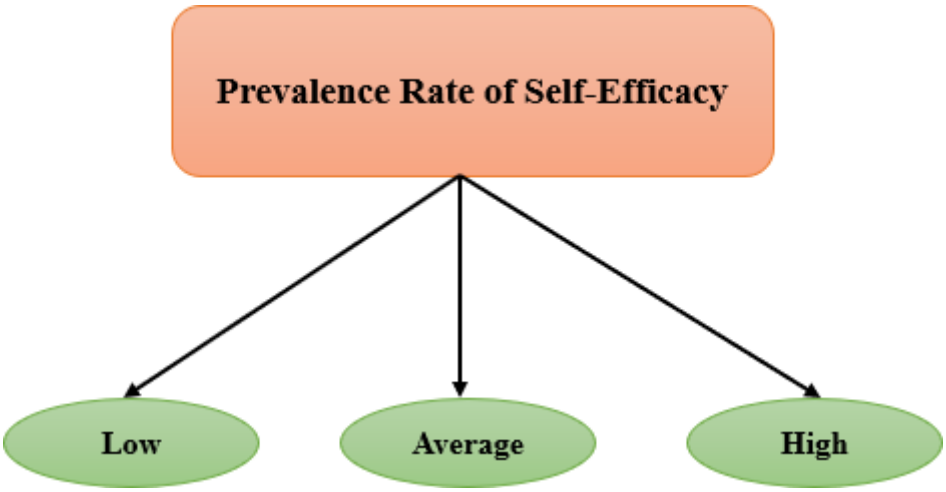


Figure 4.6. Prevalence Rate of Self-Efficacy

4.10.4. Factorial Analysis Design Relating to Objective-5 and 6

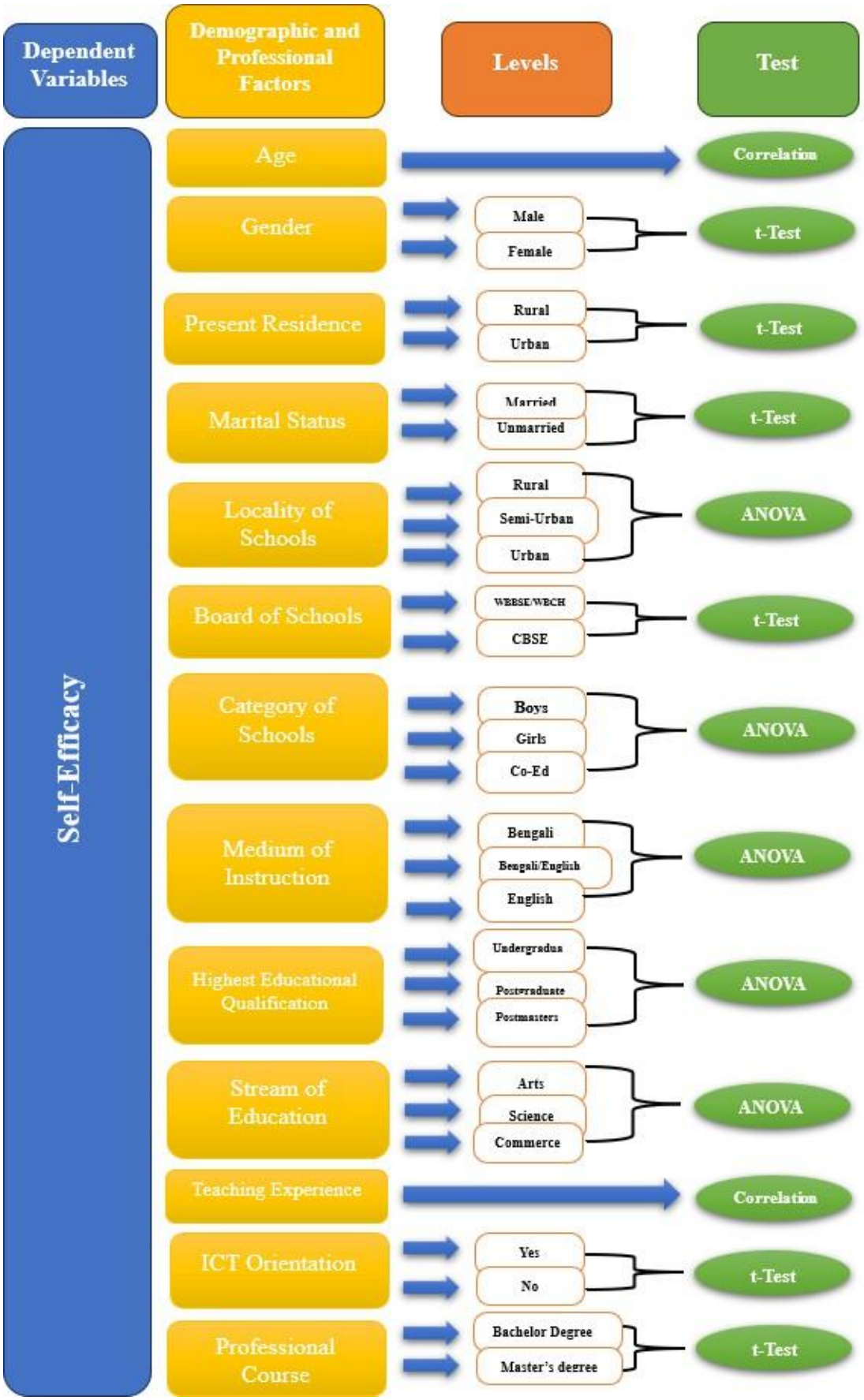


Figure 4.7. Influence of Demographic and Professional Factors on Self-Efficacy

4.10.5. Factorial Analysis Design Relating to Objective-7

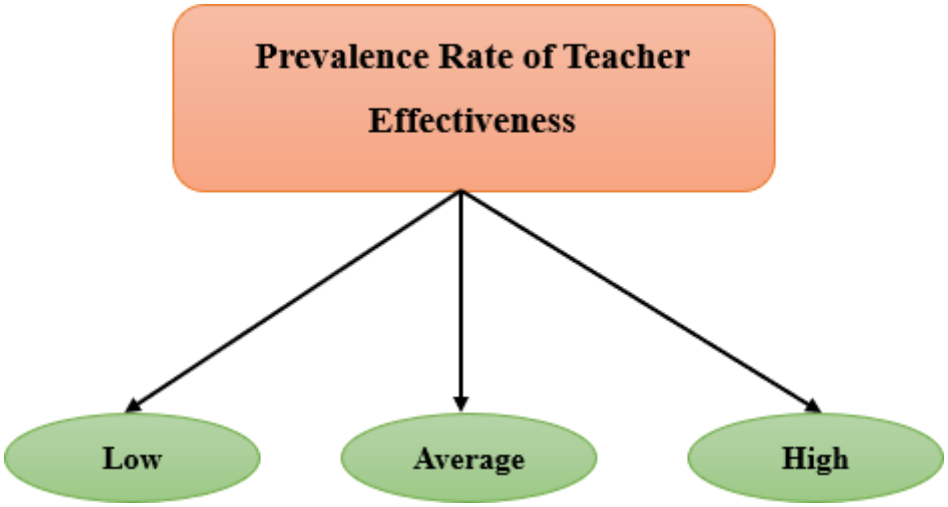


Figure 4.8. Prevalence Rate of Teacher Effectiveness

4.10.6. Factorial Analysis Design Relating to Objective-8 and 9

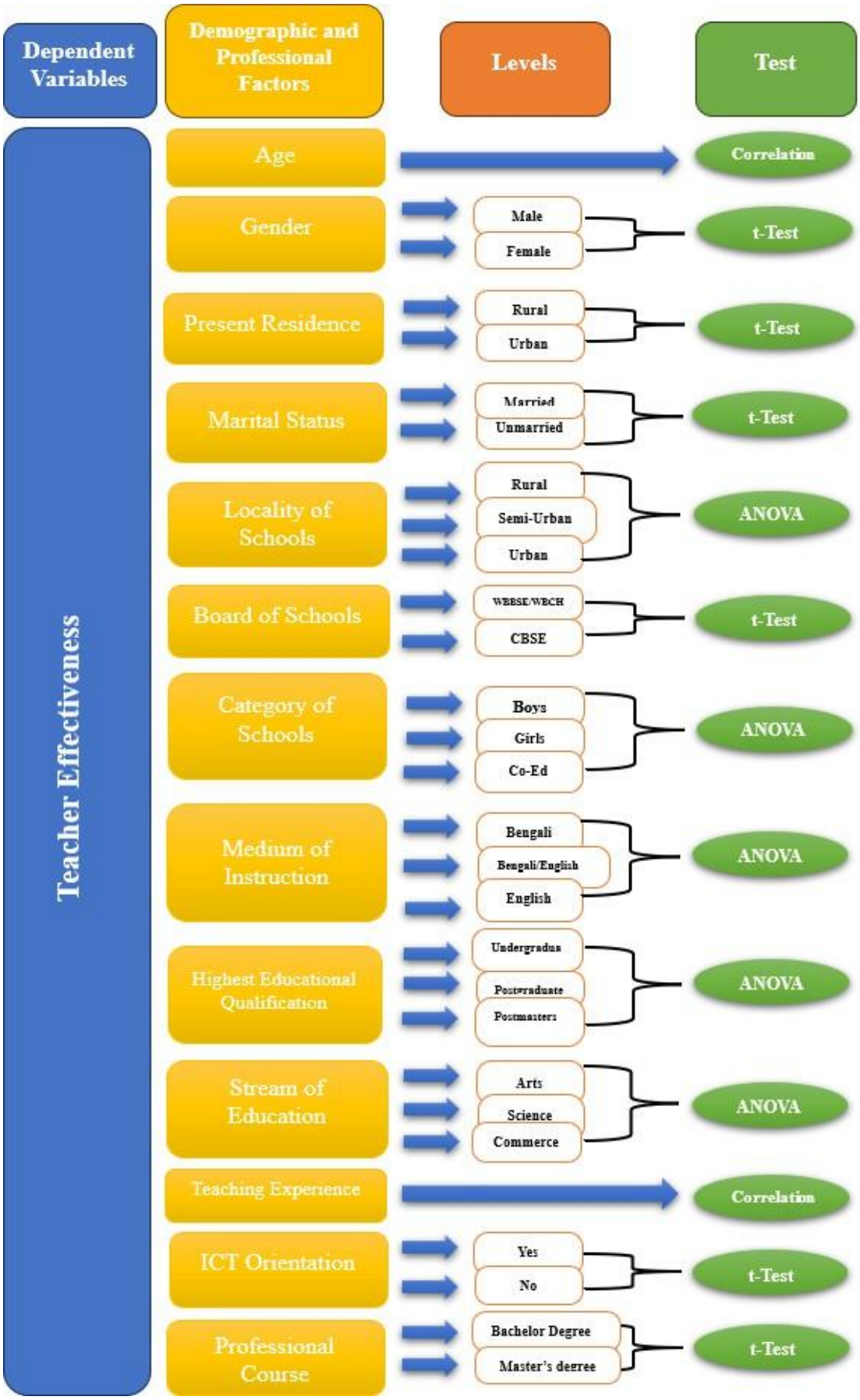


Figure 4.9. Influence of Demographic and Professional Factors on Teacher Effectiveness

4.10.7. Factorial Analysis Design Relating to Objective-10

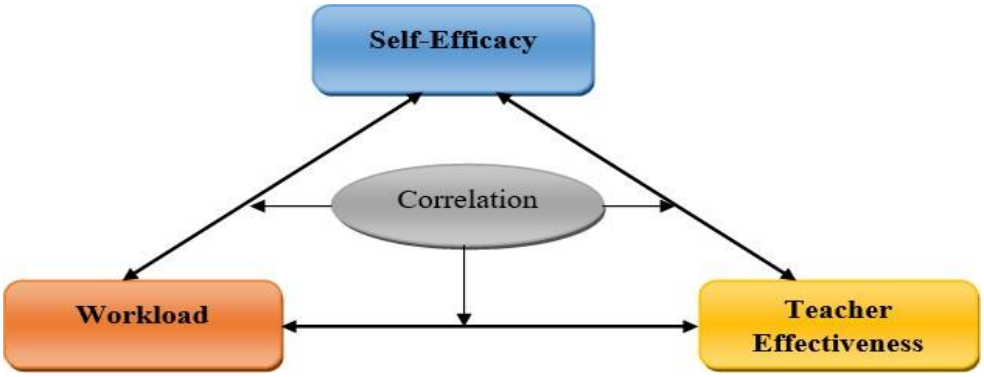


Figure 4.10. Relationship between Workload, Self-Efficacy and Teacher Effectiveness

4.10.8. Factorial Analysis Design Relating to Objective-11

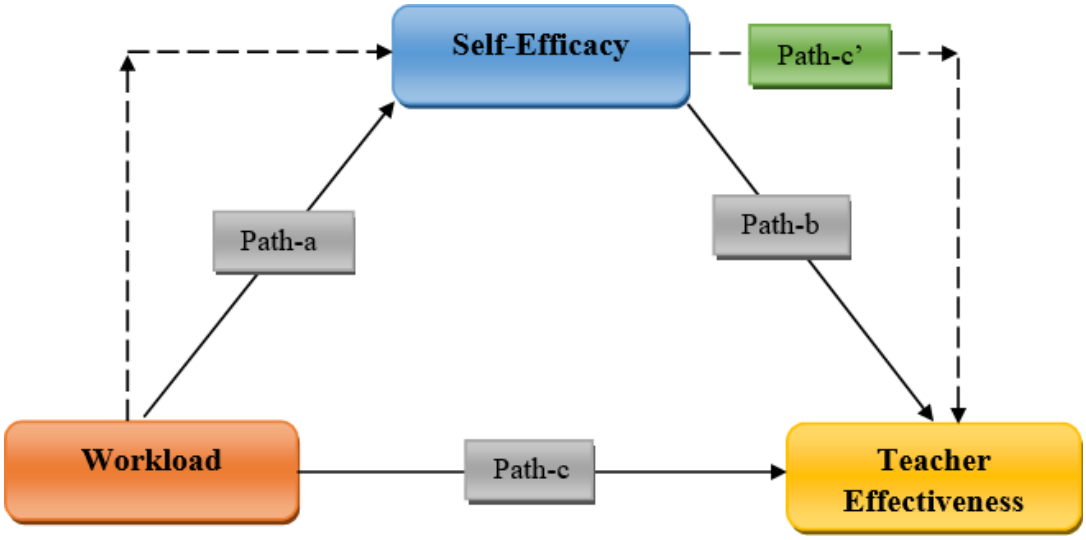


Figure 4.11. Mediating Effects of Self-Efficacy in the Relationship between Workload and Teacher Effectiveness

CHAPTER-V
ANALYSIS AND INTERPRETATION OF DATA

CHAPTER-V
ANALYSIS AND INTERPRETATION OF DATA

5.1.0. Introduction

This chapter provides an analysis and interpretation of the data collected from the participants. The main objective was to thoroughly understand the relationships among the variables. To accomplish this, both descriptive and inferential statistical methods were utilised. Descriptive statistics were used to summarise the participants' data, while inferential statistics helped estimate parameters based on the collected data (Cooksey & Cooksey, 2020; Nick, 2007). The chapter initially presents descriptive statistics and inferential techniques to examine significant relationships and patterns among the variables.

5.2.0. Analysis and Interpretations

5.2.1. Data Normality

Before starting the hypothesis testing, data normality was checked using the Kolmogorov-Smirnov (K-S) and Shapiro-Wilk (S-W) tests. The researcher also used Skewness and Kurtosis to verify the data normality among secondary-level school teachers for workload, self-efficacy (overall and dimension-wise) and teacher effectiveness (overall and dimension-wise). The results of the test are given in Table 5.1. (A). and 5.1. (B).

Table 5.1. (A) Showing the Kolmogorov-Smirnov[a] and Shapiro-Wilk Test Statistics

	Kolmogorov-Smirnov[a]			Shapiro-Wilk		
	Statistic	df	Sig.	Statistic	df	Sig.
Workload	.158	644	.000	.917	644	.000
Self-Efficacy (Overall)	.148	644	.000	.924	644	.000
SED1: Self-Confidence	.190	644	.000	.904	644	.000
SED2: Efficacy Expectation	.221	644	.000	.906	644	.000
SED3: Positive Attitude	.156	644	.000	.919	644	.000
SED4: Outcome Expectation	.164	644	.000	.926	644	.000

Teacher Effectiveness (Overall)	.138	644	.000	.919	644	.000
TED1: Personal Qualities	.199	644	.000	.906	644	.000
TED2: Classroom Management Skills	.214	644	.000	.921	644	.000
TED3: Instructional Planning and Implementation	.150	644	.000	.944	644	.000
TED4: Interpersonal Relation (Students, Colleagues, Parents)	.202	644	.000	.930	644	.000
TED5: Professional Skills	.144	644	.000	.952	644	.000
TED6: Digital Skills	.170	644	.000	.933	644	.000

Table 5.1. (B) Representing the Skewness and Kurtosis Statistics and its Standard Error

	N	Skewness		Kurtosis	
		Statistic	Std. Error	Statistic	Std. Error
Workload	644	.983	.096	.456	.192
Self-Efficacy (Overall)	644	-.891	.096	.105	.192
SED1: Self-Confidence	644	-.881	.096	.542	.192
SED2: Efficacy Expectation	644	-.989	.096	1.037	.192
SED3: Positive Attitude	644	-.851	.096	.684	.192
SED4: Outcome Expectation	644	-.669	.096	-.201	.192
Teacher Effectiveness (Overall)	644	-.943	.096	1.627	.192
TED1: Personal Qualities	644	-.911	.096	1.580	.192
TED2: Classroom Management Skills	644	-.751	.096	.349	.192
TED3: Instructional Planning and Implementation	644	-.691	.096	.882	.192
TED4: Interpersonal Relation (Students, Colleagues, Parents)	644	-.769	.096	.641	.192
TED5: Professional Skills	644	-.426	.096	-.180	.192
TED6: Digital Skills	644	-.905	.096	1.104	.192

Interpretation

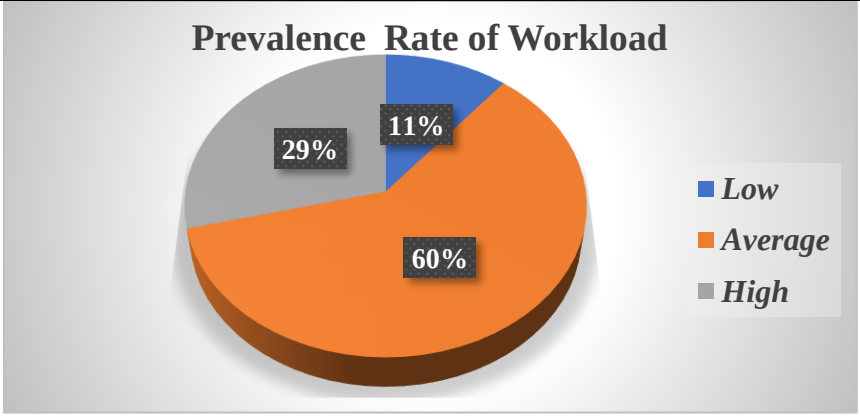
Table 5.1. (A) and 5.1. (B) show that the Kolmogorov-Smirnov and Shapiro-Wilk tests are considered normality tests. The basic assumption of these tests is data is normally distributed among the sample units. A significant result in these tests rejects the assumptions of normality and indicates the non-normality of data distribution. The test statistics show that the present study data were non-normal, as the *p*-value (Sig.) is less than 0.05 for workload, self-efficacy (overall and dimensions-wise) and teacher effectiveness (overall and dimensions-wise). That is why the researcher further calculated the Skewness and Kurtosis statistics. In the Skewness and Kurtosis tests, data is considered normal when the Skewness statistic is zero (0) and the Kurtosis statistic is .263. The deviation in these values indicates the non-normality of data. But, in social sciences, some empirical evidence is also present where a deviation of 1 to 7 in the statistic is considered normal or near normal. Curran et al. (1996) considered up to a variation of 2 for Skewness and 7 for Kurtosis. Similarly, Kline (2005) considered the variation up to 3 and 10 for Sk and Ku. In this study, the researcher followed Curran et al. (1996) and Kline (2005) and considered the distribution normal among the representatives as the Skewness and Kurtosis statistics workload, self-efficacy (overall and dimensions-wise) and teacher effectiveness (overall and dimensions-wise) were within the variation range considered.

5.2.2. Distribution of Workload

5.2.2.1. Prevalence Rate of Workload among Secondary-Level School Teachers

Table 5.2. and Figure 5.1. Prevalence Rate of Workload among Secondary-Level School Teachers

Level	Frequency	Percentage	Valid Percentage
Low	70	10.9	10.9
Average	388	60.2	60.2
High	186	28.9	28.9
Total	644	100	100



Interpretation

Table 5.1. and Figure 5.1. presented the distribution of workload levels among secondary-level school teachers. The majority of secondary-level school teachers, 60.2%, indicated an average level of workload. In comparison, 28.9% of secondary-level school teachers experienced a high level of workload. A smaller portion, 10.9%, reported a low level of workload among secondary-level school teachers.

5.2.3. Comparison of Workload Concerning Demographic Factors among Secondary-Level School Teachers

$H_0$1: There is no significant variation in workload among secondary-level school teachers concerning their demographic factors (age, gender, present residence, marital status, locality of schools, school board, school category, and medium of instruction.

5.2.3.1. Relationship Between Age and Workload among Secondary-Level School Teachers

Table 5.3. Relationship Between Age and Workload among Secondary-Level School Teachers

	Workload	
	r	***p***
Age of the Teachers	.087*	**.027**

* Correlation is significant at the 0.05 level (2-tailed).

Interpretation

Table 5.3. shows a relationship between the age of the teachers and the workload of secondary-level school teachers. The result shows a very low positive but significant relationship was found between the age and workload of secondary-level school teachers (i.e., r=.087, p=.027<0.05).

5.2.3.2. Comparison of Workload Concerning Gender

Table 5.4. Gender-wise Mean Comparison of Workload

	Gender	**N**	**Mean**	**SD**	**SEM**	**t**	**df**	***p***
Workload	Male	342	55.82	14.769	.799	3.608	642	**.000**
	Female	302	51.90	12.529	.721			

Interpretation

Table 5.4. shows that out of 644 secondary-level school teachers, the mean score of 342 male secondary-level school teachers in the workload (i.e., 55.82) is greater than the mean score of 302 female secondary-level school teachers (i.e., 51.90). It means that male

secondary-level school teachers have more workload than female secondary-level school teachers. Further, the t-test shows that (t=3.608, df=642 & p=.000<0.05) the result is significant. Hence, it indicates a significant difference in workload among secondary-level school teachers concerning their gender.

5.2.3.3. Comparison of Workload Concerning Present Residence

Table 5.5. Present Residence-wise Mean Comparison of Workload

	Present Residence	N	Mean	SD	SEM	t	df	*p*
Workload	Rural	300	54.49	14.212	.821	.877	642	.381
	Urban	344	53.53	13.612	.734			

Interpretation

Table 5.5. shows that out of 644 secondary-level school teachers, the mean score of 300 rural areas secondary-level school teachers in the case of workload (i.e., 54.49) is greater than the mean score of 344 urban areas secondary-level school teachers (i.e., 53.53). It means that in rural areas, secondary-level school teachers have more workload than teachers in urban areas secondary-level school teachers. Further, the t-test shows that (t=.877, df=642 & p=.381>0.05) the result is not significant. Hence, it indicates no significant difference in workload among secondary-level school teachers concerning their present residence.

5.2.3.4. Comparison of Workload Concerning Marital Status

Table 5.6. Marital Status-wise Mean Comparison of Workload

	Marital Status	N	Mean	SD	SEM	t	df	*p*
Workload	Married	477	54.99	14.320	.656	3.129	642	**.002**
	Unmarried	167	51.10	12.181	.943			

Interpretation

Table 5.6. shows that in the case of workload, out of 644 secondary-level school teachers, the mean score of 477 married secondary-level school teachers (i.e., 54.99) is greater than the mean score of 167 unmarried secondary-level school teachers (i.e., 51.10). It means that married secondary-level school teachers have more workload than unmarried secondary-level school teachers. Further, the t-test shows that (t=3.129, df=642 & p=.002<0.05) the result is significant. Hence, it indicates a significant difference in workload among secondary-level school teachers with regard to their marital status.

5.2.3.5. Comparison of Workload Concerning Locality of Schools

Table 5.7. (A) Locality of Schools-wise Mean Comparison of Workload

	Locality of Schools	N	Mean	SD	SEM	F	df	*p*
Workload	Rural	117	56.34	14.996	1.386	2.190	2/641	.113
	Semi-Urban	130	53.97	13.985	1.227			
	Urban	397	53.29	13.479	.676			
	Total	644	53.98	13.893	.547			

Table 5.7. (B) Locality of Schools-wise Multiple Comparison of Workload

Dependent Variable	(I) Locality of Schools	(J) Locality of Schools	Mean Difference (I-J)	Std. Error	Sig.
Workload	Rural	Semi-Urban	2.368	1.767	.181
		Urban	3.053*	1.459	**.037**
	Urban	Semi-Urban	-.684	1.401	.625

* The mean difference is significant at the 0.05 level.

Interpretation

The above table 5.7. (A) shows that in the workload, out of 644 secondary-level school teachers, the mean scores of 117 secondary-level school teachers from rural, 130 from semi-urban, and 397 from urban are 56.34, 53.97, and 53.29, respectively. It means that the secondary-level school teachers from the rural face more workload than the other category secondary-level school teachers. Further, the one-way ANOVA shows that (F=2.190, df=2/641 & p=.113) the result is not significant. Hence, it indicates no significant difference in workload among secondary-level school teachers concerning the locality of schools. Further, the multiple comparisons [see Table 5.7. (B)] on workload through LSD test showed that the actual differences lie between rural and urban (p=.037<0.05) secondary-level school teachers.

5.2.3.6. Comparison of Workload Concerning Board of Schools

Table 5.8. Board of Schools-wise Mean Comparison of Workload

	Board of Schools	N	Mean	SD	SEM	t	df	*p*
Workload	WBBBSE and WBCHSE	421	56.01	14.569	.710	5.189	642	**.000**
	CBSE	223	50.15	11.618	.778			

Interpretation

Table 5.8. shows that in the case of workload, out of 644 secondary-level school teachers, the mean score of 421 WBBBSE and WBCHSE secondary-level school teachers (i.e., 56.01) is greater than the mean score of 223 CBSE secondary-level school teachers (i.e., 50.15). It means that WBBBSE and WBCHSE secondary-level school teachers have more workload than CBSE secondary-level school teachers. Further, the t-test shows that (t=5.189, df=642 & p=.000<0.05) the result is significant. Hence, it indicates a significant difference in workload among secondary-level school teachers with regard to the board of schools.

5.2.3.7. Comparison of Workload Concerning Category of Schools

Table 5.9. (A) Category of Schools-wise Mean Comparison of Workload

	Category of Schools	**N**	**Mean**	**SD**	**SEM**	**F**	**df**	***p***
Workload	Boys	110	56.37	14.596	1.392	2.803	2/641	.061
	Girls	99	51.87	11.660	1.172			
	Co-ed School	435	53.85	14.116	.677			
	Total	644	53.98	13.893	.547			

Table 5.9. (B) Category of Schools-wise Multiple Comparison of Workload

Dependent Variable	**(I) Category of Schools**	**(J) Category of Schools**	**Mean Difference (I-J)**	**Std. Error**	**Sig.**
Workload	Boys	Girls	4.499*	1.919	**.019**
		Co-ed School	2.520	1.479	.089
	Girls	Co-ed School	1.979	1.543	.200

***** The mean difference is significant at the 0.05 level.

Interpretation

The above table 5.9. (A) shows that in the case of workload, out of 644 secondary-level school teachers, the mean scores of 110 teachers from boys' schools, 99 teachers from girls' schools, and 435 teachers from co-ed schools are 56.37, 51.87, and 53.85, respectively. It means that the secondary-level school teachers from boys' schools have more workload than the other category of secondary-level school teachers. Further, the one-way ANOVA shows that (F=2.803, df=2/641 & p=.061>0.05) the result is not significant. Hence, it indicates no significant difference in workload among secondary-level school teachers concerning the category of schools. Further, the multiple comparisons [see Table 5.9. (B)]

on workload through LSD test showed that the actual differences lie between boys' and girls' school (p=.019<0.05) secondary-level school teachers.

5.2.3.8. Comparison of Workload Concerning Medium of Instruction

Table 5.10. (A) Medium of Instruction-wise Mean Comparison of Workload

	Medium of Instruction	N	Mean	SD	SEM	F	df	*p*
Workload	Bengali	322	56.22	15.048	.839	13.611	2/641	**.000**
	English	223	50.15	11.618	.778			
	Bengali and English	99	55.32	12.937	1.300			
	Total	644	53.98	13.893	.547			

Table 5.10. (B) Medium of Instruction-wise Multiple Comparison of Workload

Dependent Variable	(I) Medium of Instruction	(J) Medium of Instruction	Mean Difference (I-J)	Std. Error	Sig.
Workload	Bengali	English	6.063*	1.187	**.000**
		Bengali and English	.891	1.566	.570
	English	Bengali and English	5.172*	1.646	**.002**

* The mean difference is significant at the 0.05 level.

Interpretation

The above table 5.10. (A) shows that in the workload, out of 644 secondary-level school teachers, the mean scores of 322 secondary-level school teachers from Bengali medium, 223 from English medium, and 99 from Bengali and English medium are 56.22, 50.15 and 55.32, respectively. It means that the secondary-level school teachers from Bengali medium show more workload than the other category of secondary-level school teachers. Further, the one-way ANOVA shows that (F=13.611, df=2/641 & p=.000<0.05) the result is significant. Hence, it indicates a significant difference in workload among secondary-level school teachers concerning the medium of instruction. Further, the multiple comparisons [see Table 5.10. (B)] on workload through LSD test showed that the actual differences lie between Bengali and English medium (p=.000<0.05), English medium and Bengali and English medium (p=.002<0.05) secondary-level school teachers.

5.2.4. Comparison of Workload Concerning Professional Factors among Secondary-Level School Teachers

$H_0$2: There is no significant variation in workload among secondary-level school teachers concerning their professional factors (highest educational qualification, stream of education, teaching experience, ICT orientation, and any other professional course.

5.2.4.1. Comparison of Workload Concerning Highest Educational Qualification among Secondary-Level School Teachers

Table 5.11. (A) Highest Educational Qualification-wise Mean Comparison of Workload

	Highest Educational Qualification	N	Mean	SD	SEM	F	df	*p*
Workload	Undergraduate (B. A, B.Sc. or B. Com)	113	55.23	14.112	1.328	3.104	2/641	**.046**
	Postgraduate (M.A., M.Sc. or M. Com)	514	53.96	13.910	.614			
	Postmasters (M.Phil. or PhD)	17	46.26	9.182	2.227			
	Total	644	53.98	13.893	.547			

Table 5.11. (B) Highest Educational Qualification-wise Multiple Comparison of Workload

Dependent Variable	(I) Highest Educational Qualification	(J) Highest Educational Qualification	Mean Difference (I-J)	Std. Error	Sig.
Workload	Undergraduate (B. A, B.Sc. or B. Com)	Postgraduate (M.A., M.Sc. or M. Com)	1.274	1.439	.376
		Postmasters (M.Phil. and/or PhD)	8.971*	3.602	**.013**
	Postgraduate (M.A., M.Sc. or M. Com)	Postmasters (M.Phil. and/or PhD)	-7.696*	3.414	**.024**

* The mean difference is significant at the 0.05 level.

Interpretation

Table 5.11. (A) shows that in the case of workload, out of 644 secondary-level school teachers, the mean score of 113 secondary-level school teachers who have qualified undergraduate (B. A, B.Sc. or B. Com), 514 secondary-level school teachers qualified postgraduate (M.A., M.Sc. or M. Com) and 17 secondary-level school teachers qualified postmasters (M.Phil. or PhD) are 55.23, 53.96, and 46.26, respectively. It means that the secondary-level school teachers who have qualified undergraduate (B. A, B.Sc. or B. Com) face more workload than the other category secondary-level school teachers. Further, the one-way ANOVA shows that (F=3.104, df=2/641 & p=.046>0.05) the result is not significant. Hence, it indicates no significant difference exists in workload among secondary-level school teachers concerning their highest educational qualification. Further, the multiple comparisons [see Table 5.11. (B)] on workload through LSD test showed that the actual differences lie between Undergraduate (B. A, B.Sc. or B. Com) and Postmasters (M.Phil. or PhD) (p=.013<0.05), Postgraduate (M.A., M.Sc. or M. Com) and Postmasters (M.Phil. or PhD) (p=.024<0.05) secondary-level school teachers.

5.2.4.2. Comparison of Workload Concerning Stream of Education

Table 5.12. (A) Stream of Education-wise Mean Comparison of Workload

	Stream of Education	N	Mean	SD	SEM	F	df	*p*
Workload	Arts	345	52.33	13.477	.726	9.582	2/641	**.000**
	Science	261	55.01	13.680	.847			
	Commerce	38	61.90	15.910	2.581			
	Total	644	53.98	13.893	.547			

Table 5.12. (B) Stream of Education-wise Multiple Comparison of Workload

Dependent Variable	(I) Stream of Education	(J) Stream of Education	Mean Difference (I-J)	Std. Error	Sig.
Workload	Arts	Science	-2.681*	1.125	**.017**
		Commerce	-9.574*	2.343	**.000**
	Science	Commerce	6.893*	2.381	**.004**

* The mean difference is significant at the 0.05 level.

Interpretation

Table 5.12. (A) shows that in the case of workload, out of 644 secondary-level school teachers, the mean scores of 345 secondary-level school teachers from arts, 261 secondary-level school teachers from science, and 38 secondary-level school teachers from commerce stream are 52.33, 55.01, and 61.90 respectively. It means that the secondary-level school

teachers from the commerce stream have more workload than the other category among secondary-level school teachers. Further, the one-way ANOVA shows that (F=9.582, df=2/641 & p=.000<0.05) the result is significant. Hence, it indicates a significant difference in workload among secondary-level school teachers concerning the stream of education. Further, the multiple comparisons [see Table 5.12. (B)] on workload through LSD test showed that the actual differences lie between arts and science (p=.017<0.05), arts and commerce stream (p=.000<0.05), and science and commerce stream (p=.004<0.05) secondary-level school teachers.

5.2.4.3. Relationship Between Year of Teaching Experience and Workload among Secondary-level School Teachers

Table 5.13. Relationship between Year of Teaching Experience and Workload

	Workload	
	r	***p***
Year of Teaching Experience	.063	.108

* Correlation is significant at the 0.05 level (2-tailed).

Interpretation

Table 5.13. shows a relationship between teaching experience and workload of secondary-level school teachers. The result indicates a positive and insignificant relationship between teaching experience and workload of secondary-level school teachers (i.e., r=.063, p=.108>0.05).

5.2.4.4. Comparison of Workload Concerning ICT Orientation

Table 5.14. ICT Orientation-wise Mean Comparison of Workload

	ICT Orientation	**N**	**Mean**	**SD**	**SEM**	**t**	**df**	***p***
Workload	Yes	389	53.59	13.818	.701	-.878	642	.380
	No	255	54.57	14.012	.877			

Interpretation

Table 5.14. shows that in the case of workload, out of 644 secondary-level school teachers, the mean score of 389 secondary-level school teachers who are ICT-oriented scored lower (i.e., 53.59) than 255 non-ICT-oriented secondary-level school teachers (i.e., 54.57). It means that non-ICT-oriented secondary-level school teachers face more workload than those with ICT-oriented secondary-level teachers. Further, the t-test shows that (t=-.878, df=642, p= .380>0.05) the result is not significant. It indicates no significant difference

exists in workload among secondary-level school teachers concerning their ICT orientation.

5.2.4.5. Comparison of Workload Concerning Professional Course

Table 5.15. Professional Course-wise Mean Comparison of Workload

	Professional Course	N	Mean	SD	SEM	t	df	*p*
Workload	Bachelor's Degree (B.Ed. or B. P. Ed.)	601	54.03	13.879	.566	.360	642	.721
	Master's Degree (M.Ed. or M. P. Ed.)	43	53.23	14.227	2.170			

Interpretation

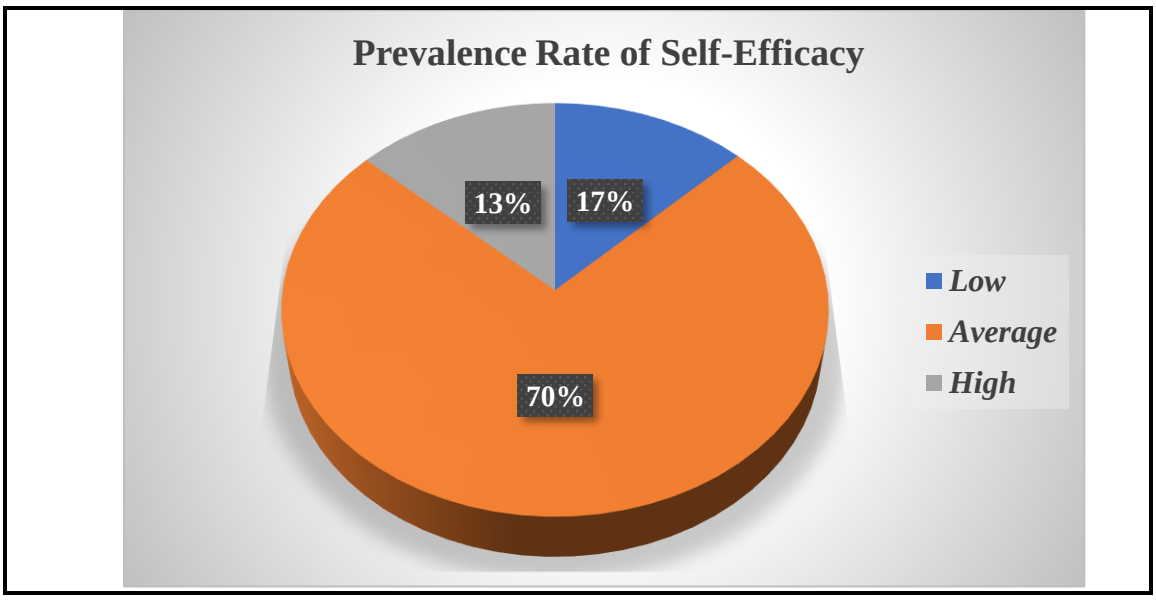
Table 5.15. shows that in the case of workload, out of 644 secondary-level school teachers, the mean score of 601 secondary-level school teachers who have bachelor's degree (B.Ed. or B. P. Ed.) (i.e., 54.03) is greater than the mean score of 43 secondary-level school teachers who have master's degree (M.Ed. or M. P. Ed.) (i.e., 53.23). It means that the secondary-level school teachers who have bachelor's degrees (B.Ed. or B. P. Ed.) face more workload than those who have master's degrees (M.Ed. or M. P. Ed.). Further, the t-test shows that (t=.360, df=642 & p=.721>0.05) the result is not significant. Hence, it indicates no significant difference exists in workload among secondary-level school teachers concerning their professional course.

5.2.5. Distribution of Self-Efficacy

5.2.5.1. Prevalence Rate of Self-Efficacy among Secondary-Level School Teachers

Table 5.16. and Figure 5.2. Prevalence Rate of Self-Efficacy among Secondary-Level School Teachers

Level	Frequency	Percentage	Valid Percentage
Low	113	17.5	17.5
Average	450	69.9	69.9
High	81	12.6	12.6
Total	644	100	100



Interpretation

Table 5.16. and Figure 5.2. presented the distribution of self-efficacy levels among secondary-level school teachers. The majority of secondary-level school teachers, 69.9%, indicated an average level of self-efficacy. In comparison, 17.5% of secondary-level school teachers experienced low self-efficacy. A smaller portion, 12.6%, reported high self-efficacy among secondary-level school teachers.

5.2.6. Comparison of Self-Efficacy (Overall and Dimensions Wise) Concerning Demographic Factors among Secondary-Level School Teachers

$H_0$3: There is no significant difference in self-efficacy (overall and dimensions-wise) among secondary-level school teachers concerning their demographic factors.

5.2.6.1. Relationship Between Age and Self-Efficacy (Overall and Dimensions Wise) among Secondary-Level School Teachers

Table 5.17. Relationship Between Age and Self-Efficacy (Overall and Dimensions Wise)

	Age of the Teachers	
	r	***p***
Self-Efficacy (Overall)	-.009	.813
SED1: Self-Confidence	.020	.608
SED2: Efficacy Expectation	-.018	.656
SED3: Positive Attitude	.001	.992
SED4: Outcome Expectation	-.028	.478

* Correlation is significant at the 0.05 level (2-tailed).

Interpretation

Table 5.17. shows a relationship between the age and overall and dimensions-wise self-efficacy among secondary-level school teachers. The result shows a low negative and insignificant relationship was found between the age of the teacher and overall self-efficacy among secondary-level school teachers (i.e., r=-.009, p=.813>0.05). The result shows a low positive and insignificant relationship between age and self-confidence dimensions of self-efficacy among secondary-level school teachers (i.e., r=.020, p=.608>0.05). At the same time, a low negative and insignificant relationship between age and efficacy expectation dimensions of self-efficacy among secondary-level school teachers (i.e., r=-.018, p=.656>0.05). The result also revealed that a low positive and insignificant relationship was found between the age and positive attitude dimensions of self-efficacy among secondary-level school teachers (i.e., r=.001, p=.992>0.05). The result also found that a very low negative and insignificant relationship was found between the age and outcome expectation dimensions of self-efficacy among secondary-level school teachers (i.e., r=-.028, p=.478>0.05).

5.2.6.2. Comparison of Self-Efficacy (Overall and Dimensions-wise) Concerning Gender

Table 5.18. Gender-wise Mean Comparison of Self-Efficacy (Overall and Dimensions-wise)

	Gender	N	Mean	SD	SEM	t	df	*p*
Self-Efficacy (Overall)	Male	342	90.13	5.525	.299	.193	642	.847
	Female	302	90.05	5.624	.324			
SED1: Self-Confidence	Male	342	22.94	1.687	.091	1.617	642	.106
	Female	302	22.73	1.745	.100			
SED2: Efficacy Expectation	Male	342	22.57	1.688	.091	-.360	642	.719
	Female	302	22.62	1.731	.100			
SED3: Positive Attitude	Male	342	22.45	1.980	.107	.018	642	.985
	Female	302	22.44	1.996	.115			
SED4: Outcome Expectation	Male	342	22.17	2.042	.110	-.545	642	.586
	Female	302	22.25	2.063	.119			

Interpretation

Table 5.18. shows that out of 644 secondary-level school teachers, the mean score of 342 male secondary-level school teachers in the overall self-efficacy (i.e., 90.13) is greater than the mean score of 302 female secondary-level school teachers (i.e., 90.05). It means that male secondary-level school teachers have more overall self-efficacy than female secondary-level school teachers. Further, the t-test shows that (t=.193, df=642 & p=.847>0.05) the result is not significant. Hence, it indicates no significant difference in overall self-efficacy among secondary-level school teachers concerning their gender.

In the dimension of self-confidence, the mean score of 342 male secondary-level school teachers (i.e., 22.94) is greater than the mean score of 302 female secondary-level school teachers (i.e., 22.73). It means that male secondary-level school teachers have more self-confidence than female secondary-level school teachers. Further, the t-test shows that (t=1.617, df=642 & p=.106>0.05) the result is not significant. Hence, it indicates no significant difference in self-confidence among secondary-level school teachers concerning their gender.

Concerning efficacy expectation, the mean score of 342 male secondary-level school teachers (i.e., 22.57) is lower than the mean score of 302 female secondary-level school teachers (i.e., 22.62). It means that female secondary-level school teachers have more efficacy expectations than male secondary-level school teachers. Further, the t-test shows that (t=-.360, df=642 & p=.719>0.05) the result is not significant. Hence, it indicates no significant difference in efficacy expectation among secondary-level school teachers concerning their gender.

The result concerning positive attitude, the mean score of 342 male secondary-level school teachers (i.e., 22.45) is greater than the mean score of 302 female secondary-level school teachers (i.e., 22.44). It means that male secondary-level school teachers have more positive attitudes than female secondary-level school teachers. Further, the t-test shows that (t=.018, df=642 & p=.985>0.05) the result is not significant. Hence, it indicates no significant difference in positive attitudes among secondary-level school teachers concerning their gender.

Regarding outcome expectation, the mean score of 342 male secondary-level school teachers (i.e., 22.17) is lower than the mean score of 302 female secondary-level school teachers (i.e., 22.25). It means that female secondary-level school teachers have more outcome expectations than male secondary-level school teachers. Further, the t-test shows that (t=-.545, df=642 & p=.586>0.05) the result is not significant. Hence, it indicates no

significant difference in outcome expectations among secondary-level school teachers concerning their gender.

5.2.6.3. Comparison of Self-Efficacy (Overall and Dimensions-wise) Concerning Present Residence

Table 5.19. Present Residence-wise Mean Comparison of Self-Efficacy (Overall and Dimensions-wise)

	Present Residence	N	Mean	SD	SEM	t	df	*p*
Self-Efficacy (Overall)	Rural	300	89.08	6.196	.358	-4.381	642	**.000**
	Urban	344	90.98	4.791	.258			
SED1: Self-Confidence	Rural	300	22.51	1.907	.110	-4.652	642	**.000**
	Urban	344	23.13	1.474	.079			
SED2: Efficacy Expectation	Rural	300	22.37	1.847	.107	-3.028	642	**.003**
	Urban	344	22.78	1.553	.084			
SED3: Positive Attitude	Rural	300	22.25	2.012	.116	-2.418	642	**.016**
	Urban	344	22.63	1.949	.105			
SED4: Outcome Expectation	Rural	300	21.94	2.092	.121	-3.080	642	**.002**
	Urban	344	22.44	1.989	.107			

Interpretation

Table 5.19. shows that out of 644 secondary-level school teachers, the mean score of 300 rural secondary-level school teachers in the overall self-efficacy (i.e.,89.08) is less than the mean score of 344 urban secondary-level school teachers (i.e., 90.98). It means that urban secondary-level school teachers have more overall self-efficacy than rural secondary-level school teachers. Further, the t-test shows that (t=-4.381, df=642 & p=.000<0.05) the result is significant. Hence, it indicates a significant difference in overall self-efficacy among secondary-level school teachers concerning their present residence.

In the dimension of self-confidence, the mean score of 300 rural secondary-level school teachers (i.e., 22.51) is less than the mean score of 344 urban secondary-level school teachers (i.e., 23.13). It means that urban secondary-level school teachers have more self-confidence than rural secondary-level school teachers. Further, the t-test shows that (t=-4.652, df=642 & p=.000<0.05) the result is significant. Hence, it indicates a significant

difference in self-confidence among secondary-level school teachers concerning their present residence.

Concerning efficacy expectation, the mean score of 300 rural secondary-level school teachers (i.e., 22.37) is lower than the mean score of 344 urban secondary-level school teachers (i.e., 22.78). This means that urban secondary-level school teachers have more efficacy expectations than rural secondary-level school teachers. Further, the t-test shows that (t=-3.028, df=642 & p=.003<0.05) the result is significant. Hence, it indicates a significant difference in efficacy expectation among secondary-level school teachers concerning their present residence.

The result concerning positive attitude, the mean score of 300 rural secondary-level school teachers (i.e., 22.25) is less than the mean score of 344 urban secondary-level school teachers (i.e., 22.63). This means that urban secondary-level school teachers have more positive attitudes than rural secondary-level school teachers. Further, the t-test shows that (t=-2.418, df=642 & p=.016<0.05) the result is significant. Hence, it indicates a significant difference in positive attitudes among secondary-level school teachers concerning their present residence.

Regarding outcome expectation, the mean score of 300 rural secondary-level school teachers (i.e., 21.94) is lower than the mean score of 344 urban secondary-level school teachers (i.e., 22.44). This means that urban secondary-level school teachers have more outcome expectations than rural secondary-level school teachers. Further, the t-test shows that (t=-3.080, df=642 & p=.002<0.05) the result is significant. Hence, it indicates a significant difference in outcome expectations among secondary-level school teachers concerning their present residence.

5.2.6.4. Comparison of Self-Efficacy (Overall and Dimensions-wise) Concerning Marital Status

Table 5.20. Marital Status-wise Mean Comparison of Self-Efficacy (Overall and Dimensions-wise)

	Marital Status	N	Mean	SD	SEM	t	df	*p*
Self-Efficacy (Overall)	Married	477	90.47	5.189	.238	2.929	642	**.004**
	Unmarried	167	89.01	6.423	.497			
SED1: Self-Confidence	Married	477	22.94	1.618	.074	2.501	642	**.013**
	Unmarried	167	22.56	1.947	.151			
SED2: Efficacy Expectation	Married	477	22.69	1.623	.074	2.568	642	**.010**
	Unmarried	167	22.30	1.903	.147			

SED3: Positive Attitude	Married	477	22.55	1.858	.085	2.155	642	**.032**
	Unmarried	167	22.17	2.294	.177			
SED4: Outcome Expectation	Married	477	22.29	2.018	.092	1.572	642	.117
	Unmarried	167	21.99	2.131	.165			

Interpretation

Table 5.20. shows that out of 644 secondary-level school teachers, the mean score of 477 married secondary-level school teachers in the overall self-efficacy (i.e. 90.47) is greater than the mean score of 167 unmarried secondary-level school teachers (i.e., 89.01). It means that married secondary-level school teachers have more overall self-efficacy than unmarried secondary-level school teachers. Further, the t-test shows that (t=2.929, df=642 & p=.004<0.05) the result is significant. Hence, it indicates a significant difference in overall self-efficacy among secondary-level school teachers concerning their marital status.

In the dimension of self-confidence, the mean score of 477 married secondary-level school teachers (i.e., 22.94) is greater than the mean score of 167 unmarried secondary-level school teachers (i.e., 22.56). It means that married secondary-level school teachers have more self-confidence than unmarried secondary-level school teachers. Further, the t-test shows that (t=2.501, df=642 & p=.013<0.05) the result is significant. Hence, it indicates a significant difference in self-confidence among secondary-level school teachers concerning their marital status.

Concerning efficacy expectation, the mean score of 477 married secondary-level school teachers (i.e., 22.69) is greater than the mean score of 167 unmarried secondary-level school teachers (i.e., 22.30). It means that married secondary-level school teachers have more efficacy expectations than unmarried secondary-level school teachers. Further, the t-test shows that (t=2.568, df=642 & p=.010<0.05) the result is significant. Hence, it indicates a significant difference in efficacy expectations among secondary-level school teachers concerning their marital status.

The result concerning positive attitude, the mean score of 477 married secondary-level school teachers (i.e., 22.55) is greater than the mean score of 167 unmarried secondary-level school teachers (i.e., 22.17). It means that married secondary-level school teachers have more positive attitudes than unmarried secondary-level school teachers. Further, the t-test shows that (t=2.155, df=642 & p=.032<0.05) the result is significant. Hence, it

indicates a significant difference in positive attitudes among secondary-level school teachers concerning their marital status.

Regarding outcome expectation, the mean score of 477 married secondary-level school teachers (i.e., 22.29) is greater than the mean score of 167 unmarried secondary-level school teachers (i.e., 21.99). This means that married secondary-level school teachers have more outcome expectations than unmarried secondary-level school teachers. Further, the t-test shows that (t=1.572, df=642 & p=.117>0.05) the result is not significant. Hence, it indicates no significant difference in outcome expectations among secondary-level school teachers concerning their marital status.

5.2.6.5. Comparison of Self-Efficacy (Overall and Dimensions-wise) Concerning Locality of Schools

Table 5.21. (A) Locality of Schools-wise Mean Comparison of Self-Efficacy (Overall and Dimensions-wise)

	Locality of Schools	N	Mean	SD	SEM	F	df	*p*
Self-Efficacy (Overall)	Rural	117	86.13	6.501	.601	48.093	2/641	**.000**
	Semi-Urban	130	89.54	5.431	.476			
	Urban	397	91.44	4.666	.234			
	Total	644	90.09	5.567	.219			
SED1: Self-Confidence	Rural	117	21.88	1.962	.181	25.741	2/641	**.000**
	Semi-Urban	130	22.83	1.766	.155			
	Urban	397	23.13	1.511	.076			
	Total	644	22.84	1.716	.068			
SED2: Efficacy Expectation	Rural	117	21.46	1.968	.182	35.296	2/641	**.000**
	Semi-Urban	130	22.69	1.729	.152			
	Urban	397	22.89	1.468	.074			
	Total	644	22.59	1.707	.067			
SED3: Positive Attitude	Rural	117	21.48	2.164	.200	20.270	2/641	**.000**
	Semi-Urban	130	22.37	1.985	.174			
	Urban	397	22.77	1.835	.092			
	Total	644	22.45	1.986	.078			
SED4: Outcome Expectation	Rural	117	21.31	2.028	.187	27.832	2/641	**.000**
	Semi-Urban	130	21.65	2.216	.194			
	Urban	397	22.66	1.865	.094			
	Total	644	22.21	2.051	.081			

Table 5.21. (B) Locality of Schools-wise Multiple Comparison of Self-Efficacy (Overall and Dimensions-wise)

Dependent Variable	(I) Locality of Schools	(J) Locality of Schools	Mean Difference (I-J)	Std. Error	Sig.
Self-Efficacy (Overall)	Rural	Semi-Urban	-3.410*	.663	**.000**
		Urban	-5.313*	.547	**.000**
	Urban	Semi-Urban	1.902	.525	**.000**
SED1: Self-Confidence	Rural	Semi-Urban	-.950*	.211	**.000**
		Urban	-1.248*	.174	**.000**
	Urban	Semi-Urban	.298	.167	.075
SED2: Efficacy Expectation	Rural	Semi-Urban	-1.231*	.207	**.000**
		Urban	-1.428*	.171	**.000**
	Urban	Semi-Urban	.197	.164	.230
SED3: Positive	Rural	Semi-Urban	-.891*	.246	**.000**
		Urban	-1.287*	.203	**.000**
	Urban	Semi-Urban	.397*	.195	**.042**
SED4: Outcome Expectation	Rural	Semi-Urban	-.338	.251	.178
		Urban	-1.350*	.207	**.000**
	Urban	Semi-Urban	1.011*	.199	**.000**

* The mean difference is significant at the 0.05 level.

Interpretation

Table 5.21. (A) shows that in the overall self-efficacy, out of 644 secondary-level school teachers, the mean scores of 117 secondary-level school teachers from rural, 130 from semi-urban, and 397 from urban are 86.13, 89.54, and 91.44, respectively. It means that secondary-level school teachers from urban face more overall self-efficacy than the other category of secondary-level school teachers. Further, the one-way ANOVA shows that (F=48.093, df=2/641 & p=.000<0.05) the result is significant. Hence, it indicates a significant difference in overall self-efficacy among secondary-level school teachers concerning the locality of schools. Further, the multiple comparisons [see Table 5.21. (B)] on overall self-efficacy through LSD test showed that the actual differences lie between rural and semi-urban (p=.000<0.05), rural and Urban (p=.000<0.05), and urban and semi-urban (p=.000<0.05) among secondary-level school teachers.

In the dimension of self-confidence, the mean scores of 117 secondary-level school teachers from rural, 130 from semi-urban, and 397 from urban are 21.88, 22.83, and 23.13, respectively. It means that the secondary-level school teachers from the urban face more

self-confidence than the other category of secondary-level school teachers. Further, the one-way ANOVA shows that (F=25.741, df=2/641 & p=.000<0.05) the result is significant. Hence, it indicates a significant difference in self-confidence among secondary-level school teachers concerning the locality of schools. Further, the multiple comparisons [see Table 5.21. (B)] on self-confidence through LSD test showed that the actual differences lie between rural and semi-urban (p=.000<0.05), rural and Urban (p=.000<0.05) among secondary-level school teachers.

Concerning efficacy expectation, the mean scores of 117 secondary-level school teachers from rural, 130 from semi-urban, and 397 from urban are 21.46, 22.69, and 22.89, respectively. It means that secondary-level school teachers from urban face more efficacy expectations than the other category of secondary-level school teachers. Further, the one-way ANOVA shows that (F=35.296, df=2/641 & p=.000<0.05) the result is significant. Hence, it indicates a significant difference in efficacy expectation among secondary-level school teachers concerning the locality of schools. Further, the multiple comparisons [see Table 5.21. (B)] on efficacy expectation through LSD test showed that the actual differences lie between rural and semi-urban (p=.000<0.05), rural and Urban (p=.000<0.05) among secondary-level school teachers.

The result concerning positive attitude, the mean score of 117 secondary-level school teachers from rural, 130 from semi-urban, and 397 from urban are 21.48, 22.37, and 22.77, respectively. It means that secondary-level school teachers from the urban face a more positive attitude than the other category secondary-level school teachers. Further, the one-way ANOVA shows that (F=20.270, df=2/641 & p=.000<0.05) the result is significant. Hence, it indicates a significant difference in positive attitudes among secondary-level school teachers concerning the locality of schools. Further, the multiple comparisons [see Table 5.21. (B)] on positive attitude through LSD test showed that the actual differences lie between rural and semi-urban (p=.000<0.05), rural and urban (p=.000<0.05), and urban and semi-urban (p=.042<0.05) among secondary-level school teachers.

Regarding outcome expectation, the mean scores of 117 secondary-level school teachers from rural, 130 from semi-urban, and 397 from urban are 21.31, 21.65, and 22.66, respectively. It means that secondary-level school teachers from the urban face more outcome expectations than the other category secondary-level school teachers. Further, the one-way ANOVA shows that (F=27.832, df=2/641 & p=.000<0.05) the result is significant. Hence, it indicates a significant difference in outcome expectations among secondary-level school teachers concerning the locality of schools. Further, the multiple comparisons [see Table 5.21. (B)] on outcome expectation through LSD test showed that

the actual differences lie between rural and urban (p=.000<0.05) and urban and semi-urban (p=.000<0.05) among secondary-level school teachers.

5.2.6.6. Comparison of Self-Efficacy (Overall and Dimensions-wise) Concerning Board of Schools

Table 5.22. Board of Schools-wise Mean Comparison of Self-Efficacy (Overall and Dimensions-wise)

	Board of Schools	N	Mean	SD	SEM	t	df	*p*
Self-Efficacy (Overall)	WBBBSE and WBCHSE	421	89.46	5.861	.286	-3.981	642	**.000**
	CBSE	223	91.28	4.757	.319			
SED1: Self-Confidence	WBBBSE and WBCHSE	421	22.67	1.824	.089	-3.571	642	**.000**
	CBSE	223	23.17	1.439	.096			
SED2: Efficacy Expectation	WBBBSE and WBCHSE	421	22.42	1.751	.085	-3.545	642	**.000**
	CBSE	223	22.91	1.573	.105			
SED3: Positive Attitude	WBBBSE and WBCHSE	421	22.34	1.955	.095	-1.868	642	.062
	CBSE	223	22.65	2.032	.136			
SED4: Outcome Expectation	WBBBSE and WBCHSE	421	22.03	2.058	.100	-2.991	642	**.003**
	CBSE	223	22.54	1.999	.134			

Interpretation

Table 5.22. shows that out of 644 secondary-level school teachers, the mean score of 421 WBBBSE and WBCHSE secondary-level school teachers in the overall self-efficacy (i.e.,89.46) is less than the mean score of 223 CBSC secondary-level school teachers (i.e., 91.28). It means that CBSC secondary-level school teachers have more overall self-efficacy than WBBBSE and WBCHSE secondary-level school teachers. Further, the t-test shows that (t=-3.981, df=642 & p=.000<0.05) the result is significant. Hence, it indicates a significant difference in overall self-efficacy among secondary-level school teachers concerning the board of schools.

In the dimension of self-confidence, the mean score of 421 WBBBSE and WBCHSE secondary-level school teachers (i.e., 22.67) is less than the mean score of 223 CBSC

secondary-level school teachers (i.e., 23.17). It means that CBSC secondary-level school teachers have more self-confidence than WBBBSE and WBCHSE secondary-level school teachers. Further, the t-test shows that (t=-3.571, df=642 & p=.000<0.05) the result is significant. Hence, it indicates a significant difference in self-confidence among secondary-level school teachers concerning the board of schools.

Concerning efficacy expectation, the mean score of 421 WBBBSE and WBCHSE secondary-level school teachers (i.e., 22.42) is lower than the mean score of 223 CBSC secondary-level school teachers (i.e., 22.91). It means that CBSC secondary-level school teachers have more efficacy expectations than WBBBSE and WBCHSE secondary-level school teachers. Further, the t-test shows that (t=-3.545, df=642 & p=.000<0.05) the result is significant. Hence, it indicates a significant difference in efficacy expectations among secondary-level school teachers concerning the board of schools.

The result concerning positive attitude, the mean score of 421 WBBBSE and WBCHSE secondary-level school teachers (i.e., 22.34) is less than the mean score of 223 CBSC secondary-level school teachers (i.e., 22.65). It means that CBSC secondary-level school teachers have a more positive attitude than WBBBSE and WBCHSE secondary-level school teachers. Further, the t-test shows that (t=-1.868, df=642 & p=.062>0.05) the result is not significant. Hence, it indicates no significant difference in positive attitudes among secondary-level school teachers concerning the board of schools.

Regarding outcome expectation, the mean score of 421 WBBBSE and WBCHSE secondary-level school teachers (i.e., 22.03) is lower than the mean score of 223 CBSC secondary-level school teachers (i.e., 22.54). It means that CBSC secondary-level school teachers have more outcome expectations than rural secondary-level school teachers. Further, the t-test shows that (t=-2.991, df=642 & p=.003<0.05) the result is significant. Hence, it indicates a significant difference in outcome expectations among secondary-level school teachers concerning the board of schools.

5.2.6.7. Comparison of Self-Efficacy (Overall and Dimensions-wise) Concerning Category of Schools

Table 5.23. (A) Category of Schools-wise Mean Comparison of Self-Efficacy (Overall and Dimensions-wise)

	Category of Schools	N	Mean	SD	SEM	F	df	*p*
	Boys	110	91.07	4.110	.392	2.680	2/641	.069
	Girls	99	89.33	6.639	.667			

Self-Efficacy (Overall)	Co-ed School	435	90.02	5.598	.268			
	Total	644	90.09	5.567	.219			
SED1: Self-Confidence	Boys	110	23.08	1.491	.142	3.019	2/641	**.050**
	Girls	99	22.51	1.945	.195			
	Co-ed School	435	22.86	1.706	.082			
	Total	644	22.84	1.716	.068			
SED2: Efficacy Expectation	Boys	110	22.80	1.262	.120	1.084	2/641	.339
	Girls	99	22.48	2.022	.203			
	Co-ed School	435	22.56	1.726	.083			
	Total	644	22.59	1.707	.067			
SED3: Positive Attitude	Boys	110	22.94	1.473	.140	4.141	2/641	**.016**
	Girls	99	22.25	1.886	.190			
	Co-ed School	435	22.37	2.102	.101			
	Total	644	22.45	1.986	.078			
SED4: Outcome Expectation	Boys	110	22.25	2.105	.201	.201	2/641	.818
	Girls	99	22.09	1.964	.197			
	Co-ed School	435	22.22	2.060	.099			
	Total	644	22.21	2.051	.081			

Table 5.23. (B) Category of Schools-wise Multiple Comparison of Self-Efficacy (Overall and Dimensions-wise)

Dependent Variable	(I) Category of Schools	(J) Category of Schools	Mean Difference (I-J)	Std. Error	Sig.
Self-Efficacy (Overall)	Boys	Girls	1.739*	.769	**.024**
		Co-ed School	1.057	.593	.075
	Girls	Co-ed School	.683	.618	.270
SED1: Self-Confidence	Boys	Girls	.577*	.237	**.015**
		Co-ed School	.224	.183	.220
	Girls	Co-ed School	.352	.191	.065
SED2: Efficacy Expectation	Boys	Girls	.315	.236	.183
		Co-ed School	.239	.182	.190
	Girls	Co-ed School	.076	.190	.689
SED3: Positive	Boys	Girls	.684*	.274	**.013**
		Co-ed School	.562*	.211	**.008**

	Girls	Co-ed School	.122	.220	.579
SED4: Outcome Expectation	Boys	Girls	.164	.284	.565
		Co-ed School	.032	.219	.886
	Girls	Co-ed School	.132	.229	.564

* The mean difference is significant at the 0.05 level.

Interpretation

Table 5.23. (A) shows that in the overall self-efficacy, out of 644 secondary-level school teachers, the mean scores of 110 secondary-level school teachers from boys, 99 from girls, and 435 from co-ed are 91.07, 89.33, and 90.02, respectively. It means that secondary-level school teachers from boys face more overall self-efficacy than the other category of secondary-level school teachers. Further, the one-way ANOVA shows that (F=2.680, df=2/641 & p=.069>0.05) the result is not significant. Hence, it indicates no significant difference in overall self-efficacy among secondary-level school teachers concerning the category of schools. Further, the multiple comparisons [see Table 5.23. (B)] on overall self-efficacy through the LSD test showed that the actual differences lie between boys and girls (p=.024<0.05) among secondary-level school teachers.

In the dimension of self-confidence, the mean scores of 110 secondary-level school teachers from boys, 99 from girls, and 435 from co-ed are 23.08, 22.51, and 22.86, respectively. It means that secondary-level school teachers from boys face more self-confidence than the other category of secondary-level school teachers. Further, the one-way ANOVA shows that (F=3.019, df=2/641 & p=.050<0.05) the result is significant. Hence, it indicates a significant difference in self-confidence among secondary-level school teachers concerning the category of schools. Further, the multiple comparisons [see Table 5.23. (B)] on self-confidence through LSD test showed that the actual differences lie between boys and girls (p=.015<0.05) among secondary-level school teachers.

Concerning efficacy expectation, the mean scores of 110 secondary-level school teachers from boys, 99 from girls, and 435 from co-ed are 22.80, 22.48, and 22.56, respectively. It means that secondary-level school teachers from boys face more efficacy expectations than the other category of secondary-level school teachers. Further, the one-way ANOVA shows that (F=1.084, df=2/641 & p=.339>0.05) the result is not significant. Hence, it indicates no significant difference in efficacy expectation among secondary-level school teachers concerning the category of schools.

The result concerning positive attitude, the mean score of 110 secondary-level school teachers from boys, 99 from girls, and 435 from co-ed are 22.94, 22.25, and 22.37, respectively. It means that the secondary-level school teachers from the boys face a more

positive attitude than the other category of secondary-level school teachers. Further, the one-way ANOVA shows that (F=4.141, df=2/641 & p=.016<0.05) the result is significant. Hence, it indicates a significant difference in positive attitudes among secondary-level school teachers concerning the category of schools. Further, the multiple comparisons [see Table 5.23. (B)] on positive attitude through LSD test showed that the actual differences lie between boys and girls (p=.013<0.05), boys and co-ed school (p=.008<0.05) among secondary-level school teachers.

Regarding outcome expectation, the mean scores of 110 secondary-level school teachers from boys, 99 from girls, and 435 from co-ed are 22.25, 22.09, and 22.22, respectively. It means that secondary-level school teachers from the boys face more outcome expectations than the other category of secondary-level school teachers. Further, the one-way ANOVA shows that (F=.201, df=2/641 & p=.818>0.05) the result is not significant. Hence, it indicates no significant difference in outcome expectation among secondary-level school teachers concerning the category of schools.

5.2.6.8. Comparison of Self-Efficacy (Overall and Dimensions-wise) Concerning Medium of Instruction

Table 5.24. (A) Medium of Instruction-wise Mean Comparison of Self-Efficacy (Overall and Dimensions-wise)

	Medium of School	N	Mean	SD	SEM	F	df	*p*
Self-Efficacy (Overall)	Bengali	322	88.82	6.235	.347	17.768	2/641	**.000**
	English	223	91.28	4.757	.319			
	Bengali and English	99	91.56	3.756	.377			
	Total	644	90.09	5.567	.219			
SED1: Self-Confidence	Bengali	322	22.54	1.917	.107	10.502	2/641	**.000**
	English	223	23.17	1.439	.096			
	Bengali and English	99	23.09	1.408	.141			
	Total	644	22.84	1.716	.068			
SED2: Efficacy Expectation	Bengali	322	22.23	1.860	.104	15.134	2/641	**.000**
	English	223	22.91	1.573	.105			
	Bengali and English	99	23.03	1.147	.115			
	Total	644	22.59	1.707	.067			

SED3: Positive Attitude	Bengali	322	22.14	2.057	.115	9.286	2/641	**.000**
	English	223	22.65	2.032	.136			
	Bengali and English	99	23.01	1.389	.140			
	Total	644	22.45	1.986	.078			
SED4: Outcome Expectation	Bengali	322	21.91	2.121	.118	6.894	2/641	**.001**
	English	223	22.54	1.999	.134			
	Bengali and English	99	22.42	1.796	.181			
	Total	644	22.21	2.051	.081			

Table 5.24. (B) Medium of Instruction-wise Multiple Comparison of Self-Efficacy (Overall and Dimensions-wise)

Dependent Variable	(I) Medium of Instruction	(J) Medium of Instruction	Mean Difference (I-J)	Std. Error	Sig.
Self-Efficacy (Overall)	Bengali	English	-2.458*	.473	**.000**
		Bengali and English	-2.736*	.624	**.000**
	English	Bengali and English	.278	.655	.672
SED1: Self-Confidence	Bengali	English	-.633*	.147	**.000**
		Bengali and English	-.554*	.194	**.005**
	English	Bengali and English	-.079	.204	.697
SED2: Efficacy Expectation	Bengali	English	-.079	.204	.697
		Bengali and English	-.685*	.146	**.000**
	English	Bengali and English	-.800*	.192	**.000**
SED3: Positive Attitude	Bengali	English	-.515*	.171	**.003**
		Bengali and English	-.870*	.225	**.000**
	English	Bengali and English	.355	.237	.134
SED4: Outcome Expectation	Bengali	English	-.625*	.177	**.000**
		Bengali and English	-.511*	.234	**.029**
	English	Bengali and English	-.114	.245	.643

* The mean difference is significant at the 0.05 level.

Interpretation

Table 5.24. (A) shows that in the overall self-efficacy, out of 644 secondary-level school teachers, the mean score of 322 secondary-level school teachers from Bengali, 223 from English, 99 from Bengali, and English are 88.82, 91.28, and 91.56, respectively. It means that secondary-level school teachers from Bengali and English face more overall self-efficacy than the other category of secondary-level school teachers. Further, the one-way ANOVA shows that ($F=17.768$, $df=2/641$ & $p=.000<0.05$) the result is significant. Hence, it indicates a significant difference in overall self-efficacy among secondary-level school teachers concerning their medium of school. Further, the multiple comparisons [see Table 5.24. (B)] on overall self-efficacy through LSD test showed that the actual differences lie between Bengali and English ($p=.000<0.05$), Bengali and Bengali and English ($p=.000<0.05$) among secondary-level school teachers.

In the dimension of self-confidence, the mean scores of 322 secondary-level school teachers from Bengali, 223 from English, 99 from Bengali and English are 22.54, 23.17, and 23.09, respectively. It means that the secondary-level school teachers from English face more self-confidence than the other category of secondary-level school teachers. Further, the one-way ANOVA shows that ($F=10.502$, $df=2/641$ & $p=.000<0.05$) the result is significant. Hence, it indicates a significant difference in self-confidence among secondary-level school teachers concerning their medium of school. Further, the multiple comparisons [see Table 5.24. (B)] on self-confidence through LSD test showed that the actual differences lie between Bengali and English ($p=.000<0.05$), Bengali and Bengali and English ($p=.005<0.05$) among secondary-level school teachers.

Concerning efficacy expectation, the mean scores of 322 secondary-level school teachers from Bengali, 223 from English, and 99 from Bengali and English are 22.23, 22.91, and 23.03, respectively. This means that secondary-level school teachers from Bengali and English face more efficacy expectations than the other category of secondary-level school teachers. Further, the one-way ANOVA shows that ($F=15.134$, $df=2/641$ & $p=.000<0.05$) the result is significant. Hence, it indicates a significant difference in efficacy expectation among secondary-level school teachers concerning their medium of school. Further, the multiple comparisons [see Table 5.24. (B)] on efficacy expectation through LSD test showed that the actual differences lie between Bengali and Bengali and English and ($p=.000<0.05$), English and Bengali and English ($p=.000<0.05$) among secondary-level school teachers.

The result concerning positive attitude, the mean score of 322 secondary-level school teachers from Bengali, 223 from English, 99 from Bengali and English are 22.14, 22.65,

and 23.01, respectively. It means that the secondary-level school teachers from Bengali and English have more positive attitudes than the other category of secondary-level school teachers. Further, the one-way ANOVA shows that (F=9.286, df=2/641 & p=.000<0.05) the result is significant. Hence, it indicates a significant difference in positive attitudes among secondary-level school teachers concerning their medium of school. Further, the multiple comparisons [see Table 5.24. (B)] on positive attitude through the LSD test showed that the actual differences lie between Bengali and English (p=.003<0.05), Bengali and Bengali and English (p=.000<0.05) among secondary-level school teachers.

Regarding outcome expectation, the mean scores of 322 secondary-level school teachers from Bengali, 223 from English, and 99 from Bengali and English are 21.91, 22.54, and 22.42, respectively. It means that secondary-level school teachers from English face more outcome expectations than the other category of secondary-level school teachers. Further, the one-way ANOVA shows that (F=6.894, df=2/641 & p=.001<0.05) the result is significant. Hence, it indicates a significant difference in outcome expectations among secondary-level school teachers concerning their medium of school. Further, the multiple comparisons [see Table 5.24. (B)] on outcome expectation through LSD test showed that the actual differences lie between Bengali and English (p=.000<0.05), Bengali and Bengali and English (p=.029<0.05) among secondary-level school teachers.

5.2.7. Comparison of Self-Efficacy (Overall and Dimensions-wise) Concerning Professional Factors among Secondary-Level School Teachers

$H_0$4: There is no significant difference in self-efficacy (overall and dimensions-wise) among secondary-level school teachers concerning their professional factors.

5.2.7.1. Comparison of Self-Efficacy (Overall and Dimensions-wise) Concerning Highest Educational Qualification among Secondary-Level School Teachers

Table 5.25. (A) Highest Educational Qualification-wise Mean Comparison of Self-Efficacy (Overall and Dimensions-wise)

	Highest Educational Qualification	N	Mean	SD	SEM	F	df	*p*
Self-Efficacy (Overall)	Undergraduate (B. A, B.Sc. or B. Com)	113	87.86	7.101	.668	11.479	2/641	**.000**
	Postgraduate (M.A., M.Sc. or M. Com)	514	90.59	5.054	.223			

	Postmasters (M.Phil. or PhD)	17	90.00	5.534	1.342			
	Total	644	90.09	5.567	.219			
SED1: Self-Confidence	Undergraduate (B. A, B.Sc. or B. Com)	113	22.35	1.977	.186	6.123	2/641	**.002**
	Postgraduate (M.A., M.Sc. or M. Com)	514	22.93	1.648	.073			
	Postmasters (M.Phil. or PhD)	17	23.35	1.320	.320			
	Total	644	22.84	1.716	.068			
SED2: Efficacy Expectation	Undergraduate (B. A, B.Sc. or B. Com)	113	22.13	2.094	.197	5.326	2/641	**.005**
	Postgraduate (M.A., M.Sc. or M. Com)	514	22.70	1.580	.070			
	Postmasters (M.Phil. or PhD)	17	22.35	2.120	.514			
	Total	644	22.59	1.707	.067			
SED3: Positive Attitude	Undergraduate (B. A, B.Sc. or B. Com)	113	21.65	2.427	.228	11.449	2/641	**.000**
	Postgraduate (M.A., M.Sc. or M. Com)	514	22.63	1.842	.081			
	Postmasters (M.Phil. or PhD)	17	22.47	1.736	.421			
	Total	644	22.45	1.986	.078			
SED4: Outcome Expectation	Undergraduate (B. A, B.Sc. or B. Com)	113	21.72	2.297	.216	4.480	2/641	**.012**
	Postgraduate (M.A., M.Sc. or M. Com)	514	22.33	1.975	.087			
	Postmasters (M.Phil. or PhD)	17	21.82	2.157	.523			
	Total	644	22.21	2.051	.081			

Table 5.25. (B) Highest Educational Qualification-wise Multiple Comparison of Self-Efficacy (Overall and Dimensions-wise)

Dependent Variable	(I) Highest Educational Qualification	(J) Highest Educational Qualification	Mean Difference (I-J)	Std. Error	Sig.
Self-Efficacy (Overall)	Undergraduate (B. A, B.Sc. or B. Com)	Postgraduate (M.A., M.Sc. or M. Com)	-2.727*	.569	**.000**
		Postmasters (M.Phil. or PhD)	-2.142	1.425	.133
	Postgraduate (M.A., M.Sc. or M. Com)	Postmasters (M.Phil. or PhD)	-.586	1.351	.665
SED1: Self-Confidence	Undergraduate (B. A, B.Sc. or B. Com)	Postgraduate (M.A., M.Sc. or M. Com)	-.578*	.177	**.001**
		Postmasters (M.Phil. or PhD)	-.999*	.443	**.024**
	Postgraduate (M.A., M.Sc. or M. Com)	Postmasters (M.Phil. or PhD)	.421	.420	.316
SED2: Efficacy Expectation	Undergraduate (B. A, B.Sc. or B. Com)	Postgraduate (M.A., M.Sc. or M. Com)	-.566*	.176	**.001**
		Postmasters (M.Phil. or PhD)	-.220	.441	.618
	Postgraduate (M.A., M.Sc. or M. Com)	Postmasters (M.Phil. or PhD)	-.346	.418	.409
SED3: Positive Attitude	Undergraduate (B. A, B.Sc. or B. Com)	Postgraduate (M.A., M.Sc. or M. Com)	-.972*	.203	**.000**
		Postmasters (M.Phil. or PhD)	-.816	.508	.109
	Postgraduate (M.A., M.Sc. or M. Com)	Postmasters (M.Phil. or PhD)	-.156	.482	.746
SED4: Outcome Expectation	Undergraduate (B. A, B.Sc. or B. Com)	Postgraduate (M.A., M.Sc. or M. Com)	-.612*	.212	**.004**
		Postmasters (M.Phil. or PhD)	-.107	.531	.841

	Postgraduate (M.A., M.Sc. or M. Com)	Postmasters (M.Phil. or PhD)	-.505	.503	.315

* The mean difference is significant at the 0.05 level.

Interpretation

Table 5.25. (A) shows that in the overall self-efficacy, out of 644 secondary-level school teachers, the mean score of 113 secondary-level school teachers from undergraduate (B. A, B.Sc. or B. Com), 514 from postgraduate (M.A., M.Sc. or M. Com), 17 from postmasters (M.Phil. and/or PhD) are 87.86, 90.59, and 90.00, respectively. It means that the secondary-level school teachers from the postgraduate (M.A., M.Sc. or M. Com) face more overall self-efficacy than the other category of secondary-level school teachers. Further, the one-way ANOVA shows that ($F=11.479$, $df=2/641$ & $p=.000<0.05$) the result is significant. Hence, it indicates a significant difference in overall self-efficacy among secondary-level school teachers concerning their highest educational qualification. Further, the multiple comparisons [see Table 5.25. (B)] on overall self-efficacy through LSD test showed that the actual differences lie between undergraduate (B. A, B.Sc. or B. Com) and postgraduate (M.A., M.Sc. or M. Com) ($p=.000<0.05$) among secondary-level school teachers.

In the dimension of self-confidence, the mean score of 113 secondary-level school teachers from undergraduate (B. A, B.Sc. or B. Com), 514 from postgraduate (M.A., M.Sc. or M. Com), 17 from postmasters (M.Phil. and/or PhD) are 22.35, 22.93, and 23.35, respectively. It means that the secondary-level school teachers from the postmasters (M.Phil. and/or PhD) face more self-confidence than the other category of secondary-level school teachers. Further, the one-way ANOVA shows that ($F=6.123$, $df=2/641$ & $p=.002<0.05$) the result is significant. Hence, it indicates a significant difference in self-confidence among secondary-level school teachers concerning their highest educational qualification. Further, the multiple comparisons [see Table 5.25. (B)] on self-confidence through LSD test showed that the actual differences lie between undergraduate (B. A, B.Sc. or B. Com) and Postgraduate (M.A., M.Sc. or M. Com) ($p=.001<0.05$), undergraduate (B. A, B.Sc. or B. Com) and postmasters (M.Phil. and/or PhD) ($p=.024<0.05$) among secondary-level school teachers.

Concerning efficacy expectation, the mean score of 113 secondary-level school teachers from undergraduate (B. A, B.Sc. or B. Com), 514 postgraduates (M.A., M.Sc. or M. Com), 17 from postmasters (M.Phil. and/or PhD) are 22.13, 22.70, and 22.35, respectively. It means that the secondary-level school teachers from the postgraduate (M.A., M.Sc. or M.

Com) face more efficacy expectations than the other category of secondary-level school teachers. Further, the one-way ANOVA shows that (F=5.326, df=2/641 & p=.005<0.05) the result is significant. Hence, it indicates a significant difference in efficacy expectation among secondary-level school teachers concerning their highest educational qualification. Further, the multiple comparisons [see Table 5.25. (B)] on efficacy expectation through LSD test showed that the actual differences lie between undergraduate (B. A, B.Sc. or B. Com) and Postgraduate (M.A., M.Sc. or M. Com) (p=.001<0.05) among secondary-level school teachers.

The result concerning positive attitude, the mean score of 113 secondary-level school teachers from undergraduate (B. A, B.Sc. or B. Com), 514 from postgraduate (M.A., M.Sc. or M. Com), 17 from postmasters (M.Phil. and/or PhD) are 21.65, 22.63, and 22.47, respectively. It means that the secondary-level school teachers from the postgraduate (M.A., M.Sc. or M. Com) have more positive attitudes than the other category of secondary-level school teachers. Further, the one-way ANOVA shows that (F=11.449, df=2/641 & p=.000<0.05) the result is significant. Hence, it indicates a significant difference in positive attitudes among secondary-level school teachers concerning their highest educational qualification. Further, the multiple comparisons [see Table 5.25. (B)] on positive attitude through LSD test showed that the actual differences lie between undergraduate (B. A, B.Sc. or B. Com) and postgraduate (M.A., M.Sc. or M. Com) (p=.000<0.05) among secondary-level school teachers.

Regarding outcome expectation, the mean score of 113 secondary-level school teachers from undergraduate (B. A, B.Sc. or B. Com), 514 from postgraduate (M.A., M.Sc. or M. Com), 17 from postmasters (M.Phil. and/or PhD) are 21.72, 22.33, and 21.82, respectively. It means that the secondary-level school teachers from the postgraduate (M.A., M.Sc. or M. Com) face more outcome expectations than the other category of secondary-level school teachers. Further, the one-way ANOVA shows that (F=4.480, df=2/641 & p=.012<0.05) the result is significant. Hence, it indicates a significant difference in outcome expectations among secondary-level school teachers concerning their highest educational qualification. Further, the multiple comparisons [see Table 5.25. (B)] on outcome expectation through LSD test showed that the actual differences lie between undergraduate (B. A, B.Sc. or B. Com) and postgraduate (M.A., M.Sc. or M. Com) (p=.004<0.05) among secondary-level school teachers.

5.2.7.2. Comparison of Self-Efficacy (Overall and Dimensions wise) Concerning Stream of Education

Table 5.26. (A) Stream of Education-wise Mean Comparison of Self-Efficacy (Overall and Dimensions-wise)

	Stream of Education	N	Mean	SD	SEM	F	df	*p*
Self-Efficacy (Overall)	Arts	345	89.79	5.759	.310	3.115	2/641	**.045**
	Science	261	90.19	5.427	.336			
	Commerce	38	92.13	4.256	.690			
	Total	644	90.09	5.567	.219			
SED1: Self-Confidence	Arts	345	22.77	1.778	.096	1.395	2/641	.249
	Science	261	22.88	1.656	.103			
	Commerce	38	23.24	1.515	.246			
	Total	644	22.84	1.716	.068			
SED2: Efficacy Expectation	Arts	345	22.48	1.750	.094	3.232	2/641	**.040**
	Science	261	22.65	1.686	.104			
	Commerce	38	23.18	1.291	.210			
	Total	644	22.59	1.707	.067			
SED3: Positive Attitude	Arts	345	22.37	2.044	.110	1.368	2/641	.255
	Science	261	22.49	1.943	.120			
	Commerce	38	22.92	1.699	.276			
	Total	644	22.45	1.986	.078			
SED4: Outcome Expectation	Arts	345	22.17	2.093	.113	1.626	2/641	.197
	Science	261	22.17	1.999	.124			
	Commerce	38	22.79	1.975	.320			
	Total	644	22.21	2.051	.081			

Table 5.26. (B) Stream of Education-wise Multiple Comparison of Self-Efficacy (Overall and Dimensions-wise)

Dependent Variable	(I) Stream of Education	(J) Stream of Education	Mean Difference (I-J)	Std. Error	Sig.
Self-Efficacy (Overall)	Arts	Science	-.400	.455	.380
		Commerce	-2.340*	.948	**.014**
	Science	Commerce	1.940*	.963	**.044**
SED1: Self-Confidence	Arts	Science	-.113	.141	.422
		Commerce	-.469	.293	.110
	Science	Commerce	.356	.298	.233
SED2: Efficacy Expectation	Arts	Science	-.173	.140	.215
		Commerce	-.706*	.291	**.015**
	Science	Commerce	.533	.295	.072
	Arts	Science	-.113	.163	.489

SED3: Positive Attitude		Commerce	-.547	.339	.107
	Science	Commerce	.434	.345	.208
SED4: Outcome Expectation	Arts	Science	-.001	.168	.993
		Commerce	-.618	.350	.078
	Science	Commerce	.617	.356	.083

* The mean difference is significant at the 0.05 level.

Interpretation

Table 5.26. (A) shows that in the overall self-efficacy, out of 644 secondary-level school teachers, the mean scores of 345 secondary-level school teachers from arts, 261 from science, and 38 from commerce are 89.79, 90.19, and 92.13, respectively. It means that the secondary-level school teachers from the commerce face more overall self-efficacy than the other category of secondary-level school teachers. Further, the one-way ANOVA shows that (F=3.115, df=2/641 & p=.045<0.05) the result is significant. Hence, it indicates a significant difference in overall self-efficacy among secondary-level school teachers concerning the stream of education. Further, the multiple comparisons [see Table 5.26. (B)] on overall self-efficacy through the LSD, test showed that the actual differences lie between arts and commerce (p=.014<0.05), science and commerce (p=.044<0.05), secondary-level school teachers.

In the dimension of self-confidence, the mean scores of 345 secondary-level school teachers from arts, 261 from science, and 38 from commerce are 22.77, 22.88, and 23.24, respectively. It means that secondary-level school teachers from the commerce face more self-confidence than the other category of secondary-level school teachers. Further, the one-way ANOVA shows that (F=1.395, df=2/641 & p=.249>0.05) the result is not significant. Hence, it indicates no significant difference in self-confidence among secondary-level school teachers concerning the stream of education.

Concerning efficacy expectation, the mean scores of 345 secondary-level school teachers from arts, 261 from science, and 38 from commerce are 22.48, 22.65, and 23.18, respectively. It means that secondary-level school teachers from the commerce face more efficacy expectations than the other category of secondary-level school teachers. Further, the one-way ANOVA shows that (F=3.232, df=2/641 & p=.040<0.05) the result is significant. Hence, it indicates a significant difference in efficacy expectations among secondary-level school teachers concerning the stream of education. Further, the multiple comparisons [see Table 5.26. (B)] on efficacy expectation through LSD test showed that the actual differences lie between arts and commerce (p=.015<0.05, secondary-level school teachers.

The result concerning positive attitude, the mean scores of 345 secondary-level school teachers from arts, 261 from science, and 38 from commerce are 22.37, 22.49, and 22.92, respectively. It means that the secondary-level school teachers from the commerce face a more positive attitude than the other category of secondary-level school teachers. Further, the one-way ANOVA shows that (F=1.368, df=2/641 & p=.255>0.05) the result is not significant. Hence, it indicates no significant difference in positive attitudes among secondary-level school teachers concerning the stream of education.

Regarding outcome expectation, the mean scores of 345 secondary-level school teachers from arts, 261 from science, and 38 from commerce are 22.17, 22.17, and 22.79, respectively. It means that secondary-level school teachers from the commerce face more outcome expectations than the other category of secondary-level school teachers. Further, the one-way ANOVA shows that (F=1.626, df=2/641 & p=.197>0.05) the result is not significant. Hence, it indicates no significant difference in outcome expectation among secondary-level school teachers concerning the stream of education.

5.2.7.3. Relationship Between Year of Teaching Experience and Self-Efficacy (Overall and Dimensions-wise) among Secondary-level School Teachers

Table 5.27. Relationship Between Year of Teaching Experience and Self-Efficacy (Overall and Dimensions-wise)

	Year of Teaching Experience	
	r	*p*
Self-Efficacy (Overall)	-.014	.723
SED1: Self-Confidence	-.008	.847
SED2: Efficacy Expectation	-.015	.710
SED3: Positive Attitude	.017	.671
SED4: Outcome Expectation	-.036	.367

* Correlation is significant at the 0.05 level (2-tailed). Year of teaching experience

Interpretation

Table 5.27. shows a relationship between years of teaching experience and overall and dimensions-wise self-efficacy among secondary-level school teachers. The result shows a very low negative and insignificant relationship between years of teaching experience and overall self-efficacy among secondary-level school teachers (i.e., r=-.014, p=.723>0.05). The result shows a low negative and insignificant relationship between years of teaching experience and self-confidence dimensions of self-efficacy among secondary-level school teachers (i.e., r=-.008, p=.847>0.05). At the same time, a low negative and insignificant relationship between years of teaching experience and efficacy expectation dimensions of

self-efficacy among secondary-level school teachers (i.e., r=-.015, *p*=.710>0.05). The result also revealed a very low positive and insignificant relationship between years of teaching experience and positive attitude dimensions of self-efficacy among secondary-level school teachers (i.e., r=.017, *p*=.671>0.05). The result also found a low negative and insignificant relationship between years of teaching experience and outcome expectation dimensions of self-efficacy among secondary-level school teachers (i.e., r=-.036, *p*=.367>0.05).

5.2.7.4. Comparison of Self-Efficacy (Overall and Dimensions-wise) Concerning ICT Orientation

Table 5.28. ICT Orientation-wise Mean Comparison of Self-Efficacy (Overall and Dimensions-wise)

	ICT Orientation	N	Mean	SD	SEM	t	df	*p*
Self-Efficacy (Overall)	Yes	389	91.22	4.610	.234	6.564	642	**.000**
	No	255	88.37	6.408	.401			
SED1: Self-Confidence	Yes	389	23.15	1.469	.074	5.856	642	**.000**
	No	255	22.36	1.945	.122			
SED2: Efficacy Expectation	Yes	389	22.84	1.503	.076	4.625	642	**.000**
	No	255	22.21	1.920	.120			
SED3: Positive Attitude	Yes	389	22.74	1.870	.095	4.583	642	**.000**
	No	255	22.02	2.079	.130			
SED4: Outcome Expectation	Yes	389	22.49	1.918	.097	4.385	642	**.000**
	No	255	21.78	2.172	.136			

Interpretation

Table 5.28. shows that in the case of overall self-efficacy, out of 644 secondary-level school teachers, the mean score of 389 ICT-oriented teachers scored higher (M = 91.22) than 255 non-ICT-oriented teachers (M = 88.37). It means that the teachers who are ICT-oriented have more overall self-efficacy than those who have non-ICT-oriented teachers. Further, the t-test shows that (t=6.564, df=642, *p*=.000<0.05) the result is significant. It indicates a significant difference exists in overall self-efficacy among secondary-level school teachers concerning their ICT orientation.

Regarding self-confidence, the mean score of 389 ICT-oriented teachers scored higher (M = 23.15) than 255 non-ICT-oriented teachers (M = 22.36). It means that the teachers who are ICT-oriented have more self-confidence than those who are non-ICT-oriented teachers. Further, the t-test shows that (t=5.856, df=642 & p=.000<0.05) the result is significant. Hence, it indicates a significant difference in self-confidence among secondary-level school teachers concerning their ICT orientation.

Regarding efficacy expectation, the mean score of 389 ICT-oriented teachers scored higher (M =22.84) than 255 non-ICT-oriented teachers (M = 22.21). It means teachers with ICT-oriented teachers have better efficacy-expectation than non-ICT-oriented teachers. Further, the t-test shows that (t=4.625, df=642 & p=.000<0.05) the result is significant. Hence, it indicates a significant difference exists in efficacy expectation among secondary-level school teachers concerning their ICT orientation.

Concerning positive attitude, the mean score of 389 ICT-oriented teachers scored higher (M =22.74) than 255 non-ICT-oriented teachers (M = 22.02). It means that the teachers who are ICT-oriented have more positive attitudes than those who have non-ICT-oriented teachers. Further, the t-test shows that (t=4.583, df=642 & p=.000<0.05) the result is significant. Hence, it indicates a significant difference exists in positive attitudes among secondary-level school teachers concerning their ICT orientation.

Regarding outcome expectation, the mean score of 389 ICT-oriented teachers scored higher (M =22.49) than 255 non-ICT-oriented teachers (M =21.78). It means that the teachers who are ICT-oriented have more outcome expectations than those who have non-ICT-oriented teachers. Further, the t-test shows that (t=4.385, df=642 & p=.000<0.05) the result is significant. Hence, it indicates a significant difference exists in outcome expectations among secondary-level school teachers concerning their ICT orientation.

5.2.7.5. Comparison of Self-Efficacy (Overall and Dimensions-wise) Concerning Professional Course

Table 5.29. Professional Course Wise Mean Comparison of Self-Efficacy (Overall and Dimensions-wise)

	Professional Course	N	Mean	SD	SEM	t	df	*p*
Self-Efficacy (Overall)	Bachelor's Degree (B.Ed. or B. P. Ed.)	601	90.03	5.628	.230	-1.216	642	.229
	Master's Degree	43	90.93	4.605	.702			

	(M.Ed. or M. P. Ed.)							
SED1: Self-Confidence	Bachelor's Degree (B.Ed. or B. P. Ed.)	601	22.82	1.729	.071	-1.542	642	.129
	Master's Degree (M.Ed. or M. P. Ed.)	43	23.19	1.500	.229			
SED2: Efficacy Expectation	Bachelor's Degree (B.Ed. or B. P. Ed.)	601	22.58	1.707	.070	-.424	642	.674
	Master's Degree (M.Ed. or M. P. Ed.)	43	22.70	1.726	.263			
SED3: Positive Attitude	Bachelor's Degree (B.Ed. or B. P. Ed.)	601	22.43	1.998	.082	-1.005	642	.320
	Master's Degree (M.Ed. or M. P. Ed.)	43	22.72	1.804	.275			
SED4: Outcome Expectation	Bachelor's Degree (B.Ed. or B. P. Ed.)	601	22.20	2.068	.084	-.436	642	.664
	Master's Degree (M.Ed. or M. P. Ed.)	43	22.33	1.809	.276			

Interpretation

Table 5.29. shows that out of 644 secondary-level school teachers, the mean score of 601 bachelor's degree (B.Ed. or B. P. Ed.) secondary-level school teachers in the overall self-efficacy (i.e.,90.03) is less than the mean score of 43 master's degree (M.Ed. or M. P. Ed.) secondary-level school teachers (i.e., 90.93). It means that bachelor's degree (B.Ed. or B. P. Ed.) secondary-level school teachers have less overall self-efficacy than master's degree (M.Ed. or M. P. Ed.) secondary-level school teachers. Further, the t-test shows that (t=-1.216, df=642 & p=.229>0.05) the result is not significant. Hence, it indicates no

significant difference in overall self-efficacy among secondary-level school teachers concerning their professional course.

In the dimension of self-confidence, the mean score of 601 bachelor's degree (B.Ed. or B. P. Ed.) secondary-level school teachers (i.e., 22.82) is less than the mean score of 43 master's degree (M.Ed. or M. P. Ed.) secondary-level school teachers (i.e., 23.19). It means that master's degree (M.Ed. or M. P. Ed.) secondary-level school teachers have more self-confidence than bachelor degree (B.Ed. or B. P. Ed.) secondary-level school teachers. Further, the t-test shows that (t=-1.542, df=642 & p=.129>0.05) the result is not significant. Hence, it indicates no significant difference in self-confidence among secondary-level school teachers concerning their professional course.

Concerning efficacy expectation, the mean score of 601 bachelor's degree (B.Ed. or B. P. Ed.) secondary-level school teachers (i.e., 22.58) is lower than the mean score of 43 master's degree (M.Ed. or M. P. Ed.) secondary-level school teachers (i.e., 22.70). It means that master's degree (M.Ed. or M. P. Ed.) secondary-level school teachers have more efficacy expectations than bachelor degree (B.Ed. or B. P. Ed.) secondary-level school teachers. Further, the t-test shows that (t=-.424, df=642 & p=.674>0.05) the result is not significant. Hence, it indicates no significant difference in efficacy expectation among secondary-level school teachers concerning their professional course.

The result concerning positive attitude, the mean score of 601 bachelor's degree (B.Ed. or B. P. Ed.) secondary-level school teachers (i.e., 22.43) is less than the mean score of 43 master's degree (M.Ed. or M. P. Ed.) secondary-level school teachers (i.e., 22.72). It means that master's degree (M.Ed. or M. P. Ed.) secondary-level school teachers have more positive attitudes than bachelor degree (B.Ed. or B. P. Ed.) secondary-level school teachers. Further, the t-test shows that (t=-1.005, df=642 & p=.320>0.05) the result is not significant. Hence, it indicates no significant difference in positive attitudes among secondary-level school teachers concerning their professional course.

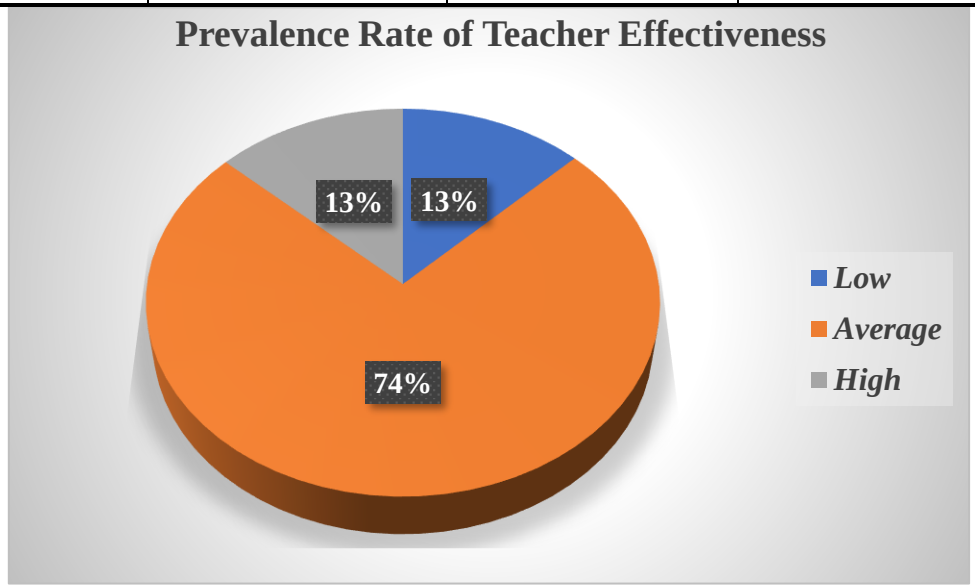
Regarding outcome expectation, the mean score of 601 bachelor's degree (B.Ed. or B. P. Ed.) secondary-level school teachers (i.e., 22.20) is lower than the mean score of 43 master's degree (M.Ed. or M. P. Ed.) secondary-level school teachers (i.e., 22.33). It means that master's degree (M.Ed. or M. P. Ed.) secondary-level school teachers have more outcome expectations than bachelor's degree (B.Ed. or B. P. Ed.) secondary-level school teachers. Further, the t-test shows that (t=-.436, df=642 & p=.664>0.05) the result is not significant. Hence, it indicates no significant difference in outcome expectations among secondary-level school teachers concerning their professional course.

5.2.8. Distribution of Teacher Effectiveness

5.2.8.1. Prevalence Rate of Teacher Effectiveness among Secondary-Level School Teachers

Table 5.30. and Figure 5.3. Prevalence Rate of Teacher Effectiveness among Secondary-Level School Teachers

Level	Frequency	Percentage	Valid Percentage
Low	82	12.7	12.7
Average	477	74.1	74.1
High	85	13.2	13.2
Total	644	100	100



Interpretation

Table 5.30. and Figure 5.3. presented the distribution of teacher effectiveness levels among secondary-level school teachers. The majority of secondary-level school teachers, 74.1%, indicated an average overall level of teacher effectiveness. In comparison, 13.2% of secondary-level school teachers experienced high teacher effectiveness. A smaller portion, 12.7%, reported low teacher effectiveness among secondary-level school teachers.

5.2.9. Comparison of Teacher Effectiveness (Overall and Dimensions-wise) Concerning Demographic Factors among Secondary-Level School Teachers

$H_0$5: There is no significant variation in teacher effectiveness (overall and dimensions-wise) among secondary-level school teachers concerning their demographic factors.

5.2.9.1. Relationship between Age and Teacher Effectiveness (Overall and Dimensions- wise) among Secondary-Level School Teachers

Table 5.31. Relationship Between Age and Teacher Effectiveness (Overall and Dimensions-wise)

	Age of the Teachers	
	r	***p***
Teacher Effectiveness (Overall)	-.024	.540
TED1: Personal Qualities	.048	.222
TED2: Classroom Management Skills	.041	.299
TED3: Instructional Planning and Implementation	.009	.816
TED4: Interpersonal Relation (Students, Colleagues, Parents)	.007	.851
TED5: Professional Skills	-.085*	**.031**
TED6: Digital Skills	-.097*	**.013**

* Correlation is significant at the 0.05 level (2-tailed).

Interpretation

Table 5.31. shows a relationship between the age and overall and dimensions-wise teacher effectiveness among secondary-level school teachers. The result shows a low negative and insignificant relationship between age and overall teacher effectiveness among secondary-level school teachers (i.e., r=-.024, p=.540>0.05). The result shows a low positive and insignificant relationship between age and personal qualities dimensions of teacher effectiveness among secondary-level school teachers (i.e., r=.048, p=.222>0.05). At the same time, a low positive and insignificant relationship between age and classroom management skill dimensions of teacher effectiveness among secondary-level school teachers (i.e., r=.041, p=.299>0.05). The result also revealed a low positive and insignificant relationship between age and instructional planning and implementation dimensions of teacher effectiveness among secondary-level school teachers (i.e., r=.009, p=.816>0.05). The result also found that a low positive and insignificant relationship was found between age and Interpersonal Relation (Students, Colleagues, Parents) dimensions of teacher effectiveness among secondary-level school teachers (i.e., r=.007, p=.851>0.05). The result also shows a low negative but significant relationship between age and professional skills dimensions of teacher effectiveness among secondary-level school teachers (i.e., r=-.085, p=.031<0.05). The result also shows a low negative but significant relationship between age and digital skills dimensions of teacher effectiveness among secondary-level school teachers (i.e., r=-.097, p=.013<0.05).

5.2.9.2. Comparison of Teacher Effectiveness (Overall and Dimensions-wise) Concerning Gender

Table 5.32. Gender-wise Mean Comparison of Teacher Effectiveness (Overall and Dimensions-wise)

	Gender	N	Mean	SD	SEM	t	df	*p*
Teacher Effectiveness (Overall)	Male	342	220.30	7.414	.401	.558	642	.577
	Female	302	219.95	8.275	.476			
TED1: Personal Qualities	Male	342	37.06	1.842	.100	.903	642	.367
	Female	302	36.92	2.160	.124			
TED2: Classroom Management Skills	Male	342	32.23	1.641	.089	.878	642	.380
	Female	302	32.11	1.687	.097			
TED3: Instructional Planning and Implementation	Male	342	46.13	1.886	.102	.980	642	.327
	Female	302	45.98	2.025	.117			
TED4: Interpersonal Relation (Students, Colleagues, Parents)	Male	342	36.67	1.774	.096	.418	642	.676
	Female	302	36.61	1.853	.107			
TED5: Professional Skills	Male	342	36.82	1.896	.103	-.838	642	.402
	Female	302	36.94	1.799	.104			
TED6: Digital Skills	Male	342	31.39	2.301	.124	-.008	642	.994
	Female	302	31.29	2.382	.137			

Interpretation

Table 5.32. shows that out of 644 secondary-level school teachers, the mean score of 342 male secondary-level school teachers in the case of overall teacher effectiveness (i.e., 220.30) is greater than the mean score of 302 female secondary-level school teachers (i.e., 219.95). It means that male secondary-level school teachers have more overall teacher effectiveness than female secondary-level school teachers. Further, the t-test shows that (t=.558, df=642 & p=.577>0.05) the result is not significant. Hence, it indicates no significant difference in overall teacher effectiveness among secondary-level school teachers concerning their gender.

In the case of personal qualities, the mean score of 342 male secondary-level school teachers (i.e., 37.06) is greater than the mean score of 302 female secondary-level school teachers (i.e., 36.92). It means that male secondary-level school teachers have more personal qualities than female secondary-level school teachers. Further, the t-test shows that (t=.903, df=642 & p=.367>0.05) the result is not significant. Hence, it indicates no significant difference in personal qualities among secondary-level school teachers concerning their gender.

The result concerning classroom management skills is that the mean score of 342 male secondary-level school teachers (i.e., 32.23) is greater than that of 302 female secondary-level school teachers (i.e., 32.11). It means that male secondary-level school teachers have more classroom management skills than female secondary-level school teachers. Further, the t-test shows that (t=.878, df=642 & p=.380>0.05) the result is not significant. Hence, it indicates no significant difference in classroom management skills among secondary-level school teachers concerning their gender.

Concerning instructional planning and implementation, the mean score of 342 male secondary-level school teachers (i.e., 46.13) is greater than the mean score of 302 female secondary-level school teachers (i.e., 45.98). It means that male secondary-level school teachers have more instructional planning and implementation than secondary-level school teachers. Further, the t-test shows that (t=.980, df=642 & p=.327>0.05) the result is not significant. Hence, it indicates no significant difference in instructional planning and implementation among secondary-level school teachers concerning their gender.

Regarding interpersonal relations (Students, Colleagues, Parents), the mean score of 342 male secondary-level school teachers (i.e., 36.67) is greater than the mean score of 302 female secondary-level school teachers (i.e., 36.61). It means that male secondary-level school teachers have more interpersonal relations (Students, Colleagues, Parents) than female secondary-level school teachers. Further, the t-test shows that (t=.418, df=642 & p=.676>0.05) the result is not significant. Hence, it indicates no significant difference in interpersonal relations (Students, Colleagues, Parents) among secondary-level school teachers concerning their gender.

In the case of professional skills, the mean score of 342 male secondary-level school teachers (i.e., 36.82) is less than the mean score of 302 female secondary-level school teachers (i.e., 36.94). It means that female secondary-level school teachers have more professional skills than male secondary-level school teachers. Further, the t-test shows that (t=-.838, df=642 & p=.402>0.05) the result is not significant. Hence, it indicates no

significant difference in professional skills among secondary-level school teachers concerning their gender.

Regarding digital skills, the mean score of 342 male secondary-level school teachers (i.e., 31.39) is greater than the mean score of 302 female secondary-level school teachers (i.e., 31.29). It means that male secondary-level school teachers have more digital skills than female secondary-level school teachers. Further, the t-test shows that (t=-.008, df=642 & p=.994>0.05) the result is not significant. Hence, it indicates no significant difference in digital skills among secondary-level school teachers concerning their gender.

5.2.9.3. Comparison of Teacher Effectiveness (Overall and Dimensions-wise) Concerning Present Residence

Table 5.33. Present Residence-wise Mean Comparison of Teacher Effectiveness (Overall and Dimensions-wise)

	Present Residence	N	Mean	SD	SEM	t	df	*p*
Teacher Effectiveness (Overall)	Rural	300	219.06	8.598	.496	-3.280	642	**.001**
	Urban	344	221.08	6.960	.375			
TED1: Personal Qualities	Rural	300	36.70	2.200	.127	-3.555	642	**.000**
	Urban	344	37.26	1.764	.095			
TED2: Classroom Management Skills	Rural	300	32.10	1.779	.103	-1.091	642	.276
	Urban	344	32.24	1.553	.084			
TED3: Instructional Planning and Implementation	Rural	300	45.93	2.137	.123	-1.529	642	.127
	Urban	344	46.17	1.771	.096			
TED4: Interpersonal Relation (Students, Colleagues, Parents)	Rural	300	36.44	1.949	.113	-2.689	642	**.007**
	Urban	344	36.82	1.663	.090			
TED5: Professional Skills	Rural	300	36.96	1.874	.108	1.080	642	.281
	Urban	344	36.81	1.829	.099			

TED6: Digital Skills	Rural	300	30.93	2.616	.151	-4.670	642	**.000**
	Urban	344	31.78	1.984	.107			

Interpretation

Table 5.33. shows that out of 644 secondary-level school teachers, the mean score of 300 rural areas secondary-level school teachers in the case of overall teacher effectiveness (i.e., 219.06) is less than the mean score of 344 urban areas secondary-level school teachers (i.e.,221.08). It means that urban areas secondary-level school teachers have more overall teacher effectiveness than rural areas secondary-level school teachers. Further, the t-test shows that (t=-3.280, df=642 & p=.001<0.05) the result is significant. Hence, it indicates a significant difference in overall teacher effectiveness among secondary-level school teachers concerning their present residence.

In the case of personal qualities, the mean score of 300 rural areas secondary-level school teachers in the case of overall teacher effectiveness (i.e., 36.70) is less than the mean score of 344 urban areas secondary-level school teachers (i.e., 37.26). It means that the teachers from the urban areas secondary-level school teachers have higher personal qualities than the rural areas secondary-level school teachers. Further, the t-test shows that (t=-3.555, df=642, p=.000<0.05) the result is significant. Hence, it indicates a significant difference in personal qualities among secondary-level school teachers concerning their present residence.

In the case of classroom management skills, the mean score of 300 rural areas secondary-level school teachers (i.e., 32.10) is less than the mean score of 344 urban areas secondary-level school teachers (i.e., 32.24). It means that urban areas secondary-level school teachers have more classroom management skills than rural areas secondary-level school teachers. Further, the t-test shows that (t=-1.091, df=642, & p=.276>0.05) the result is not significant. Hence, it indicates no significant difference in classroom management skills among secondary-level school teachers concerning their present residence.

The result revealed that in the dimension of instructional planning and implementation, the mean score of 300 rural areas secondary-level school teachers (i.e., 45.93) is less than the mean score of 344 urban areas secondary-level school teachers (i.e., 46.17). This means that the teachers from the urban areas secondary-level school teachers have higher instructional planning and implementation quality than the rural areas' secondary-level school teachers. Further, the t-test result shows that (t=-1.529, df=642 & p=.127>0.05) the result is not significant. Hence, it indicates no significant difference in instructional planning and implementation among secondary-level school teachers concerning their present residence.

The result concerning interpersonal relations (Students, Colleagues, Parents), the mean score of 300 rural secondary-level school teachers (i.e., 36.44) is less than the mean score of 344 urban secondary-level school teachers (i.e., 36.82). It means that urban areas secondary-level school teachers have more interpersonal relations (Students, Colleagues, Parents) than rural areas secondary-level school teachers. Further, the t-test shows that (t=-2.689, df=642 & p=.007<0.05) the result is significant. Hence, it indicates a significant difference in interpersonal relations (Students, Colleagues, Parents) among secondary-level school teachers concerning their present residence.

Concerning professional skills, the mean score of 300 rural areas secondary-level school teachers (i.e., 36.96) is greater than the mean score of 344 urban areas secondary-level school teachers (i.e., 36.81). It means that in rural areas, secondary-level school teachers have more professional skills than in urban areas secondary-level school teachers. Further, the t-test result shows that (t=1.080, df=642 & p=.281>0.05) the result is not significant. Hence, it indicates no significant difference in professional skills among secondary-level school teachers concerning their present residence.

Regarding digital skills, the mean score of 300 rural areas secondary-level school teachers (i.e., 30.93) is less than the mean score of 344 urban areas secondary-level school teachers (i.e.,31.78). This means that urban areas' secondary-level school teachers have more digital skills than rural areas' secondary-level school teachers. Further, the t-test shows that (t=-4.670, df=642 & p=.000<0.05) the result is significant. Hence, it indicates a significant difference in digital skills among secondary-level school teachers concerning their present residence.

5.2.9.4. Comparison of Teacher Effectiveness (Overall and Dimensions-wise) Concerning Marital Status

Table 5.34. Marital Status-wise Mean Comparison of Teacher Effectiveness (Overall and Dimensions-wise)

	Marital Status	N	Mean	SD	SEM	t	df	*p*
Teacher Effectiveness (Overall)	Married	477	220.63	6.975	.319	-3.280	642	**.001**
	Unmarried	167	218.73	9.746	.754			
TED1: Personal Qualities	Married	477	37.17	1.858	.085	-3.555	642	**.000**
	Unmarried	167	36.51	2.286	.177			

TED2: Classroom Management Skills	Married	477	32.31	1.572	.072	-1.091	642	.276
	Unmarried	167	31.78	1.847	.143			
TED3: Instructional Planning and Implementation	Married	477	46.12	1.885	.086	-1.529	642	.127
	Unmarried	167	45.87	2.129	.165			
TED4: Interpersonal Relation (Students, Colleagues, Parents)	Married	477	36.74	1.736	.080	-2.689	642	**.007**
	Unmarried	167	36.37	1.986	.154			
TED5: Professional Skills	Married	477	36.89	1.727	.079	1.080	642	.281
	Unmarried	167	36.84	2.171	.168			
TED6: Digital Skills	Married	477	31.40	2.310	.106	-4.670	642	**.000**
	Unmarried	167	31.35	2.420	.187			

Interpretation

Table 5.34. shows that in the case of overall teacher effectiveness out of 644 secondary-level school teachers, the mean score of 477 married secondary-level school teachers (i.e., 220.63) is greater than the mean score of 167 unmarried secondary-level school teachers (i.e., 218.73). It means that married secondary-level school teachers have more overall teacher effectiveness than unmarried secondary-level school teachers. Further, the t-test shows that (t=-3.280, df=642 & p=.001<0.05) the result is significant. Hence, it indicates a significant difference in overall teacher effectiveness among secondary-level school teachers with regard to their marital status.

In the dimensions of personal qualities, the mean score of 477 married secondary-level school teachers (i.e., 37.17) is greater than the mean score of 167 unmarried secondary-level school teachers (i.e., 36.51). It means that married secondary-level school teachers have more personal qualities than unmarried secondary-level school teachers. Further, the t-test shows that (t=-3.555, df=642 & p=.000<0.05) the result is significant. Hence, it indicates a significant difference exists in personal qualities among secondary-level school teachers with regard to their marital status.

Regarding the dimensions of classroom management skills, the mean score of 477 married secondary-level school teachers (i.e., 32.31) is greater than the mean score of 167

unmarried secondary-level school teachers (i.e., 31.78). It means that married secondary-level school teachers have better classroom management skills compared to than unmarried secondary-level school teachers. Further, the t-test shows that (t=-1.091, df=642 & p=.276>0.05) the result is not significant. Hence, it indicates no significant difference exists in classroom management skills among secondary-level school teachers with regard to their marital status.

Results show that in the dimensions of instructional planning and implementation, the mean score of 477 married secondary-level school teachers (i.e., 46.12) is greater than the mean score of 167 unmarried secondary-level school teachers (i.e., 45.87). It means that married secondary-level school teachers have better instructional planning and implementation than unmarried secondary-level school teachers. Further, the t-test shows that (t=-1.529, df=642 & p=.127>0.05) the result is not significant. Hence, it indicates no significant difference exists in instructional planning and implementation among secondary-level school teachers with regard to their marital status.

The above table also shows that in the dimensions of interpersonal relation (Students, Colleagues, Parents), the mean score of 477 married secondary-level school teachers (i.e., 36.74) is greater than the mean score of 167 unmarried secondary-level school teachers (i.e., 36.37). It means that married secondary-level school teachers have better interpersonal relations (Students, Colleagues, Parents) than unmarried secondary-level school teachers. Further, the t-test shows that (t=-2.689, df=642 & p=.007<0.05) the result is significant. Hence, it indicates a significant difference exists in interpersonal relations (Students, Colleagues, Parents) among secondary-level school teachers with regard to their marital status.

In professional skills, the mean score of 477 married secondary-level school teachers (i.e., 36.89) is greater than the mean score of 167 unmarried secondary-level school teachers (i.e., 36.84). It means that married secondary-level school teachers have more professional skills than unmarried secondary-level school teachers. Further, the t-test shows that (t=1.080, df=642 & p=.281>0.05) the result is not significant. Hence, it indicates no significant difference exists in professional skills among secondary-level school teachers with regard to their marital status.

Results revealed that in the case of digital skills, the mean score of 477 married secondary-level school teachers (i.e., 31.40) is greater than the mean score of 167 unmarried secondary-level school teachers (i.e., 31.35). It means that married secondary-level school teachers have better digital skills compared to unmarried secondary-level school teachers. Further, the t-test shows that (t=-4.670, df=642 & p=.000<0.05) the result is significant.

Hence, it indicates a significant difference exists in digital skills among secondary-level school teachers with regard to their marital status.

5.2.9.5. Comparison of Teacher Effectiveness (Overall and Dimensions-wise) Concerning Locality of Schools

Table 5.35. (A) Locality of Schools-wise Mean Comparison of Teacher Effectiveness (Overall and Dimensions-wise)

	Locality of Schools	N	Mean	SD	SEM	F	df	*p*
Teacher Effectiveness (Overall)	Rural	117	215.09	9.575	.885	43.449	2/641	**.000**
	Semi-Urban	130	218.78	7.620	.668			
	Urban	397	222.07	6.464	.324			
	Total	644	220.14	7.825	.308			
TED1: Personal Qualities	Rural	117	35.97	2.585	.239	21.947	2/641	**.000**
	Semi-Urban	130	36.93	1.822	.160			
	Urban	397	37.32	1.738	.087			
	Total	644	37.00	1.997	.079			
TED2: Classroom Management Skills	Rural	117	31.51	1.968	.182	22.176	2/641	**.000**
	Semi-Urban	130	31.77	1.687	.148			
	Urban	397	32.50	1.461	.073			
	Total	644	32.17	1.662	.065			
TED3: Instructional Planning and Implementation	Rural	117	45.26	2.461	.228	18.448	2/641	**.000**
	Semi-Urban	130	45.73	1.887	.166			
	Urban	397	46.40	1.708	.086			
	Total	644	46.06	1.952	.077			
TED4: Interpersonal Relation (Students, Colleagues, Parents)	Rural	117	35.66	2.174	.201	27.572	2/641	**.000**
	Semi-Urban	130	36.46	1.722	.151			
	Urban	397	36.99	1.597	.080			
	Total	644	36.64	1.810	.071			
TED5: Professional Skills	Rural	117	36.63	2.160	.200	3.727	2/641	**.025**
	Semi-Urban	130	36.62	1.856	.163			
	Urban	397	37.04	1.735	.087			
	Total	644	36.88	1.851	.073			
	Rural	117	30.05	2.674	.247	28.367	2/641	**.000**

TED6: Digital Skills	Semi-Urban	130	31.26	2.284	.200			
	Urban	397	31.82	2.087	.105			
	Total	644	31.39	2.337	.092			

Table 5.35. (B) Locality of Schools-wise Multiple Comparison of Teacher Effectiveness (Overall and Dimensions wise)

Dependent Variable	(I) Locality of Schools	(J) Locality of Schools	Mean Difference (I-J)	Std. Error	Sig.
Teacher Effectiveness (Overall)	Rural	Semi-Urban	-3.683*	.937	**.000**
		Urban	-6.977*	.774	**.000**
	Urban	Semi-Urban	3.294*	.743	**.000**
TED1: Personal Qualities	Rural	Semi-Urban	-.956*	.247	**.000**
		Urban	-1.346*	.204	**.000**
	Urban	Semi-Urban	.389*	.196	**.047**
TED2: Classroom Management Skills	Rural	Semi-Urban	-.256	.205	.212
		Urban	-.988*	.169	**.000**
	Urban	Semi-Urban	.732*	.163	**.000**
TED3: Instructional Planning and Implementation	Rural	Semi-Urban	-.466	.242	.055
		Urban	-1.133*	.200	**.000**
	Urban	Semi-Urban	.667*	.192	**.001**
TED4: Interpersonal Relation (Students, Colleagues, Parents)	Rural	Semi-Urban	-.803*	.222	**.000**
		Urban	-1.337*	.183	**.000**
	Urban	Semi-Urban	.533*	.176	**.003**
TED5: Professional Skills	Rural	Semi-Urban	.009	.235	.968
		Urban	-.403*	.194	**.038**
	Urban	Semi-Urban	.412*	.186	**.027**
TED6: Digital Skills	Rural	Semi-Urban	-1.210*	.286	**.000**
		Urban	-1.770*	.236	**.000**
	Urban	Semi-Urban	.560*	.227	**.014**

* The mean difference is significant at the 0.05 level.

Interpretation

The above Table 5.35. (A) shows that in the case of overall teacher effectiveness, out of 644 secondary-level school teachers, the mean scores of 117 secondary-level school teachers from rural, 130 from semi-urban, and 397 from urban are 215.09, 218.78, and 222.07, respectively. It means that the secondary-level school teachers from the urban face more overall teacher effectiveness than the other category of secondary-level school

teachers. Further, the one-way ANOVA shows that (F=43.449, df=2/641 & p=.000<0.05) the result is significant. Hence, it indicates a significant difference in overall teacher effectiveness among secondary-level school teachers concerning the locality of schools. Further, the multiple comparisons [see Table 5.35. (B)] on overall teacher effectiveness through LSD test showed that the actual differences lie between rural and semi-urban (p=.000<0.05), rural and Urban (p=.000<0.05), and urban and semi-urban (p=.000<0.05) secondary-level school teachers.

In the case of personal qualities, the mean scores of 117 secondary-level school teachers from rural, 130 from semi-urban, and 397 from urban are 35.97, 36.93, and 37.32, respectively. It means that secondary-level school teachers from urban face more personal qualities than the other category of secondary-level school teachers. Further, the one-way ANOVA shows that (F=21.947, df=2/641 & p=.000<0.05) the result is significant. Hence, it indicates a significant difference in personal qualities among secondary-level school teachers concerning the locality of schools. Further, the multiple comparisons [see Table 5.35. (B)] on personal qualities through LSD test showed that the actual differences lie between rural and semi-urban (p=.000<0.05), rural and Urban (p=.000<0.05), and urban and semi-urban (p=.047<0.05) secondary-level school teachers.

The result concerning classroom management skills, the mean scores of 117 secondary-level school teachers from rural, 130 from semi-urban, and 397 from urban are 31.51, 31.77, and 32.50, respectively. It means that secondary-level school teachers from urban face more classroom management skills than the other category of secondary-level school teachers. Further, the one-way ANOVA shows that (F=22.176, df=2/641 & p=.000<0.05) the result is significant. Hence, it indicates a significant difference in classroom management skills among secondary-level school teachers concerning the locality of schools. Further, the multiple comparisons [see Table 5.35. (B)] on classroom management skills through the LSD test showed that the actual differences lie between rural and Urban (p=.000<0.05) and urban and semi-urban (p=.000<0.05) secondary-level school teachers.

Concerning instructional planning and implementation, the mean scores of 117 secondary-level school teachers from rural, 130 from semi-urban, and 397 from urban are 45.26, 45.73, and 46.40, respectively. It means that the secondary-level school teachers from the urban face more instructional planning and implementation than the other category secondary-level school teachers. Further, the one-way ANOVA shows that (F=18.448, df=2/641 & p=.000<0.05) the result is significant. Hence, it indicates a significant difference in instructional planning and implementation among secondary-level school teachers concerning the locality of schools. Further, the multiple comparisons [see Table

5.35. (B)] on instructional planning and implementation through the LSD test showed that the actual differences lie between rural and Urban (p=.000<0.05) and urban and semi-urban (p=.001<0.05) secondary-level school teachers.

Regarding interpersonal relations (Students, Colleagues, Parents), the mean scores of 117 secondary-level school teachers from rural, 130 from semi-urban, and 397 from urban are 35.66, 36.46, and 36.99, respectively. It means that secondary-level school teachers from urban face more interpersonal relations (Students, Colleagues, Parents) than the other category of secondary-level school teachers. Further, the one-way ANOVA shows that (F=27.572, df=2/641 & p=.000<0.05) the result is significant. Hence, it indicates a significant difference in interpersonal relations (Students, Colleagues, Parents) among secondary-level school teachers concerning the locality of schools. Further, the multiple comparisons [see Table 5.35. (B)] on interpersonal relations (Students, Colleagues, Parents) through the LSD test showed that the actual differences lie between rural and semi-urban (p=.000<0.05), rural and Urban (p=.000<0.05), and urban and semi-urban (p=.003<0.05) secondary-level school teachers.

In the case of professional skills, the mean scores of 117 secondary-level school teachers from rural, 130 from semi-urban, and 397 from urban are 36.63, 36.62, and 37.04, respectively. It means that the secondary-level school teachers from the urban face more professional skills than the other category secondary-level school teachers. Further, the one-way ANOVA shows that (F=3.727, df=2/641 & p=.025<0.05) the result is significant. Hence, it indicates a significant difference in professional skills among secondary-level school teachers concerning the locality of schools. Further, the multiple comparisons [see Table 5.35. (B)] on professional skills through LSD test showed that the actual differences lie between rural and Urban (p=.038<0.05) and urban and semi-urban (p=.027<0.05) secondary-level school teachers.

Regarding digital skills, the mean scores of 117 secondary-level school teachers from rural, 130 from semi-urban, and 397 from urban are 30.05, 31.26, and 31.82, respectively. This means that secondary-level school teachers from urban face more digital skills than the other category of secondary-level school teachers. Further, the one-way ANOVA shows that (F=28.367, df=2/641 & p=.000<0.05) the result is significant. Hence, it indicates a significant difference in digital skills among secondary-level school teachers concerning the locality of schools. Further, the multiple comparisons [see Table 5.35. (B)] on digital skills through LSD test showed that the actual differences lie between rural and semi-urban (p=.000<0.05), rural and Urban (p=.000<0.05), and urban and semi-urban (p=.014<0.05) secondary-level school teachers.

5.2.9.6. Comparison of Teacher Effectiveness (Overall and Dimensions-wise) Concerning Board of Schools

Table 5.36. Board of Schools-wise Mean Comparison of Teacher Effectiveness (Overall and Dimensions-wise)

	Board of School	N	Mean	SD	SEM	t	df	*p*
Teacher Effectiveness (Overall)	WBBBSE and WBCHSE	421	219.32	7.892	.385	-3.700	642	**.000**
	CBSE	223	221.69	7.470	.500			
TED1: Personal Qualities	WBBBSE and WBCHSE	421	37.02	2.012	.098	.430	642	.667
	CBSE	223	36.95	1.971	.132			
TED2: Classroom Management Skills	WBBBSE and WBCHSE	421	32.11	1.700	.083	-1.335	642	.182
	CBSE	223	32.29	1.585	.106			
TED3: Instructional Planning and Implementation	WBBBSE and WBCHSE	421	45.88	1.913	.093	-3.213	642	**.001**
	CBSE	223	46.39	1.986	.133			
TED4: Interpersonal Relation (Students, Colleagues, Parents)	WBBBSE and WBCHSE	421	36.57	1.829	.089	-1.541	642	.124
	CBSE	223	36.79	1.769	.118			
TED5: Professional Skills	WBBBSE and WBCHSE	421	36.74	1.862	.091	-2.698	642	**.007**
	CBSE	223	37.15	1.804	.121			
TED6: Digital Skills	WBBBSE and WBCHSE	421	31.00	2.442	.119	-5.880	642	**.000**
	CBSE	223	32.11	1.931	.129			

Interpretation

Table 5.36. shows that in the case of overall teacher effectiveness, out of 644 secondary-level school teachers, the mean score of 421 WBBBSE and WBCHSE secondary-level school teachers (i.e., 219.32) is less than the mean score of 223 CBSE secondary-level

school teachers (i.e., 221.69). It means that CBSE secondary-level school teachers have more overall teacher effectiveness than WBBBSE and WBCHSE secondary-level school teachers. Further, the t-test shows that (t=-3.700, df=642 & p=.000<0.05) the result is significant. Hence, it indicates a significant difference in overall teacher effectiveness among secondary-level school teachers with regard to the board of schools.

In the dimensions of personal qualities, the mean score of 421 WBBBSE and WBCHSE secondary-level school teachers (i.e., 37.02) is greater than the mean score of 223 CBSE secondary-level school teachers (i.e., 36.95). It means that WBBBSE and WBCHSE secondary-level school teachers have batter personal qualities than CBSE secondary-level school teachers. Further, the t-test shows that (t=.430, df=642 & p=.667>0.05) the result is not significant. Hence, it indicates no significant difference exists in personal qualities among secondary-level school teachers with regard to the board of schools.

Results show that in the dimensions of classroom management skill, the mean score of 421 WBBBSE and WBCHSE secondary-level school teachers (i.e., 32.11) is less than the mean score of 223 CBSE secondary-level school teachers (i.e., 32.29). It means that CBSE secondary-level school teachers have better classroom management skills compared to WBBBSE and WBCHSE secondary-level school teachers. Further, the t-test shows that (t=-1.335, df=642 & p=.182>0.05) the result is not significant. Hence, it indicates no significant difference exists in classroom management skills among secondary-level school teachers with regard to the board of schools.

The above table also shows that in the dimensions of instructional planning and implementation, the mean score of 421 WBBBSE and WBCHSE secondary-level school teachers is 45.88, less than the mean score of 223 CBSE secondary-level school teachers is 46.39. It means that CBSE secondary-level school teachers have better instructional planning and implementation strategies than WBBBSE and WBCHSE secondary-level school teachers. Further, the t-test shows that (t=-3.213, df=642 & p=.001<0.05) the result is significant. Hence, it indicates a significant difference exists in instructional planning and implementation among secondary-level school teachers with regard to the board of schools.

In the case of interpersonal relations (Students, Colleagues, Parents), the mean score of 421 WBBBSE and WBCHSE secondary-level school teachers (i.e., 36.57) less than the mean score of 223 CBSE teachers (i.e., 36.79). It means that CBSE secondary-level school teachers have better interpersonal relations (Students, Colleagues, Parents) than WBBBSE and WBCHSE secondary-level school teachers. Further, the t-test shows that (t=-1.541, df=642 & p=.124>0.05) the result is not significant. Hence, it indicates no significant

difference exists in interpersonal relations (Students, Colleagues, Parents) among secondary-level school teachers with regard to the board of schools.

In professional skills, the mean score of 421 WBBBSE and WBCHSE secondary-level school teachers (i.e., 36.74) is less than the mean score of 223 CBSE secondary-level school teachers (i.e., 37.15). It means that CBSE secondary-level school teachers have more professional skills than WBBBSE and WBCHSE secondary-level school teachers. Further, the t-test shows that (t=-2.698, df=642 & p=.007<0.05) the result is significant. Hence, it indicates a significant difference exists in professional skills among secondary-level school teachers with regard to the board of schools.

Results revealed that in the case of digital skills, the mean score of 421 WBBBSE and WBCHSE secondary-level school teachers (i.e., 31.00) is less than the mean score of 223 CBSE secondary-level school teachers (i.e., 32.11). It means that CBSE secondary-level school teachers have more digital skills compared to WBBBSE and WBCHSE secondary-level school teachers. Further, the t-test shows that (t=-5.880, df=642 & p=.000<0.05) the result is significant. Hence, it indicates a significant difference exists in digital skills among secondary-level school teachers with regard to their digital skills.

5.2.9.7. Comparison of Teacher Effectiveness (Overall and Dimensions-wise) Concerning Category of Schools

Table 5.37. (A) Category of Schools-wise Mean Comparison of Teacher Effectiveness (Overall and Dimensions-wise)

	Category of Schools	N	Mean	SD	SEM	F	df	*p*
Teacher Effectiveness (Overall)	Boys	110	221.91	5.876	.560	3.500	2/641	**.031**
	Girls	99	220.05	8.402	.844			
	Co-ed School	435	219.71	8.070	.387			
	Total	644	220.14	7.825	.308			
TED1: Personal Qualities	Boys	110	37.64	1.425	.136	8.847	2/641	**.000**
	Girls	99	37.21	2.076	.209			
	Co-ed School	435	36.79	2.065	.099			
	Total	644	37.00	1.997	.079			
TED2: Classroom Management Skills	Boys	110	32.37	1.439	.137	.949	2/641	.388
	Girls	99	32.13	1.777	.179			
	Co-ed School	435	32.13	1.688	.081			
	Total	644	32.17	1.662	.065			

TED3: Instructional Planning and Implementation	Boys	110	46.33	1.314	.125	1.368	2/641	.255
	Girls	99	46.08	1.983	.199			
	Co-ed School	435	45.98	2.074	.099			
	Total	644	46.06	1.952	.077			
TED4: Interpersonal Relation (Students, Colleagues, Parents)	Boys	110	37.01	1.449	.138	2.790	2/641	.062
	Girls	99	36.64	1.821	.183			
	Co-ed School	435	36.55	1.881	.090			
	Total	644	36.64	1.810	.071			
TED5: Professional Skills	Boys	110	36.88	1.701	.162	.114	2/641	.892
	Girls	99	36.80	1.922	.193			
	Co-ed School	435	36.90	1.874	.090			
	Total	644	36.88	1.851	.073			
TED6: Digital Skills	Boys	110	31.68	2.027	.193	1.258	2/641	.285
	Girls	99	31.19	2.602	.261			
	Co-ed School	435	31.36	2.346	.112			
	Total	644	31.39	2.337	.092			

Table 5.37. (B) Category of Schools-wise Multiple Comparison of Teacher Effectiveness (Overall and Dimensions wise)

Dependent Variable	(I) Category of Schools	(J) Category of Schools	Mean Difference (I-J)	Std. Error	Sig.
Teacher Effectiveness (Overall)	Boys	Girls	1.859	1.080	.086
		Co-ed School	2.199*	.832	**.008**
	Girls	Co-ed School	.340	.868	.695
TED1: Personal Qualities	Boys	Girls	.424	.273	.121
		Co-ed School	.850*	.211	**.000**
	Girls	Co-ed School	.426	.220	.053
TED2: Classroom Management Skills	Boys	Girls	.241	.230	.295
		Co-ed School	.239	.177	.178
	Girls	Co-ed School	-.002	.185	.991
TED3: Instructional Planning and Implementation	Boys	Girls	.246	.270	.362
		Co-ed School	.343	.208	.100
	Girls	Co-ed School	.097	.217	.656
TED4: Interpersonal Relation	Boys	Girls	.373	.250	.137
		Co-ed School	.455*	.193	**.018**
	Girls	Co-ed School	.082	.201	.682

(Students, Colleagues, Parents)					
TED5: Professional Skills	Boys	Girls	.084	.257	.744
		Co-ed School	-.015	.198	.941
	Girls	Co-ed School	-.099	.206	.633
TED6: Digital Skills	Boys	Girls	.490	.324	.131
		Co-ed School	.325	.249	.192
	Girls	Co-ed School	-.164	.260	.528

* The mean difference is significant at the 0.05 level.

Interpretation

The above Table 5.37. (A) shows that in the case of overall teacher effectiveness, out of 644 secondary-level school teachers, the mean scores of 110 teachers from boys' schools, 99 teachers from girls' schools, and 435 teachers from co-ed schools are 221.91, 220.05, and 219.71, respectively. It means that the secondary-level school teachers from boys' schools have more overall teacher effectiveness than the other category of secondary-level school teachers. Further, the one-way ANOVA shows that ($F=3.500$, $df=2/641$ & $p=.031<0.05$) the result is significant. Hence, it indicates a significant difference in overall teacher effectiveness among secondary-level school teachers concerning the category of schools. Further, the multiple comparisons [see Table 5.37. (B)] on overall teacher effectiveness through LSD test showed that the actual differences lie between boys and co-ed school ($p=.008<0.05$) secondary-level school teachers.

Regarding the personal qualities dimension, the mean scores of 110 secondary-level school teachers from boys' schools, 99 from girls' schools, and 435 from co-ed schools are 37.64, 37.21, and 36.79, respectively. It means that the secondary-level school teachers from the boys' school have more personal qualities than the other category of secondary-level school teachers. Further, the one-way ANOVA shows that ($F=8.847$, $df=2/641$ & $p=.000<0.05$) the result is significant. Hence, it indicates a significant difference in personal qualities among secondary-level school teachers concerning the category of schools. Further, the multiple comparisons [see Table 5.37. (B)] on personal qualities through LSD test showed that the actual differences lie between boys and co-ed school ($p=.000<0.05$) secondary-level school teachers.

Results revealed that in the case of classroom management skills, the mean scores of 110 secondary-level schools' teachers from boys' schools, 99 from girls' schools, and 435 from co-ed schools are 32.37, 32.13, and 32.13, respectively. It means that secondary-level school teachers in boys' schools' teachers have better classroom management skills

compared to other category secondary-level school teachers. Further, the one-way ANOVA shows that (F=.949, df=2/641 & p=.388>0.05) the result is not significant. Hence, it indicates no significant difference exists in classroom management skills among secondary-level school teachers with regard to the category of schools.

In instructional planning and implementation, the mean scores of 110 secondary-level school teachers from boys' schools, 99 from girls' schools, and 435 from co-ed schools are 46.33, 46.08, and 45.98, respectively. It means that secondary-level school teachers from boys' school teachers have more instructional planning and implementation skills compared to the other category of secondary-level school teachers. Further, the one-way ANOVA shows that (F=1.368, df=2/641 & p=.225>0.05) the result is not significant. Hence, it indicates no significant difference exists in instructional planning and implementation among secondary-level school teachers with regard to the category of schools.

In the dimension of interpersonal relation (Students, Colleagues, Parents), the mean scores of 110 secondary-level school teachers from boys' schools, 99 from girls' schools, and 435 from co-ed schools are 37.01, 36.64, and 36.55, respectively. It means that the secondary-level school teachers from the boys' school have better interpersonal relations (Students, Colleagues, Parents) than the other category of secondary-level school teachers. Further, the one-way ANOVA shows that (F=2.790, df=2/641 & p=.062>0.05) the result is not significant. Hence, it indicates no significant difference in interpersonal relations (Students, Colleagues, Parents) among secondary-level school teachers concerning the category of schools. Further, the multiple comparisons [see Table 5.37. (B)] on interpersonal relations (Students, Colleagues, Parents) through the LSD test showed that the actual differences lie between boys and co-ed school (p=.018<0.05) secondary-level school teachers.

In the case of professional skills, the mean scores of 110 secondary-level school teachers from boys' schools, 99 from girls' schools, and 435 from co-ed schools are 36.88, 36.80, and 36.90, respectively. It means that the secondary-level school teachers from the co-ed school show better professional skills than the other category of secondary-level school teachers. Further, the one-way ANOVA shows that (F=.114, df=2/641 & p=.892>0.05) the result is not significant. Hence, it indicates no significant difference in professional skills among secondary-level school teachers concerning the category of schools.

Results show that in the dimensions of digital skills, the mean scores of 110 secondary-level school teachers from boys' schools, 99 from girls' schools, and 435 from co-ed schools are 31.68, 31.19, and 31.36, respectively. It means that secondary-level school

teachers from the boy's school teachers have more digital skills than the other category of secondary-level school teachers. Further, the one-way ANOVA shows that (F=1.258, df=2/641 & p=.285>0.05) the result is not significant. Hence, it indicates no significant difference in digital skills among secondary-level school teachers concerning the category of schools.

5.2.9.8. Comparison of Teacher Effectiveness (Overall and Dimensions-wise) Concerning Medium of Instruction

Table 5.38. (A) Medium of Instruction-wise Mean Comparison of Teacher Effectiveness (Overall and Dimensions-wise)

	Medium of Instruction	N	Mean	SD	SEM	F	df	*p*
Teacher Effectiveness (Overall)	Bengali	322	218.51	8.547	.476	14.640	2/641	**.000**
	English	223	221.69	7.470	.500			
	Bengali and English	99	221.95	4.303	.432			
	Total	644	220.14	7.825	.308			
TED1: Personal Qualities	Bengali	322	36.75	2.145	.120	13.694	2/641	**.000**
	English	223	36.95	1.971	.132			
	Bengali and English	99	37.92	1.104	.111			
	Total	644	37.00	1.997	.079			
TED2: Classroom Management Skills	Bengali	322	31.99	1.814	.101	4.340	2/641	**.013**
	English	223	32.29	1.585	.106			
	Bengali and English	99	32.49	1.190	.120			
	Total	644	32.17	1.662	.065			
TED3: Instructional Planning and Implementation	Bengali	322	45.75	2.078	.116	8.030	2/641	**.000**
	English	223	46.39	1.986	.133			
	Bengali and English	99	46.28	1.152	.116			
	Total	644	46.06	1.952	.077			
TED4: Interpersonal Relation (Students, Colleagues, Parents)	Bengali	322	36.45	1.960	.109	4.114	2/641	**.017**
	English	223	36.79	1.769	.118			
	Bengali and English	99	36.95	1.248	.125			
	Total	644	36.64	1.810	.071			
TED5: Professional Skills	Bengali	322	36.74	1.929	.108	3.635	2/641	**.027**
	English	223	37.15	1.804	.121			
	Bengali and English	99	36.74	1.632	.164			

	Total	644	36.88	1.851	.073			
TED6: Digital Skills	Bengali	322	30.83	2.576	.144	21.476	2/641	**.000**
	English	223	32.11	1.931	.129			
	Bengali and English	99	31.57	1.847	.186			
	Total	644	31.39	2.337	.092			

Table 5.38. (B) Medium of Instruction-wise Multiple Comparison of Teacher Effectiveness (Overall and Dimensions-wise)

Dependent Variable	(I) Medium of Instruction	(J) Medium of Instruction	Mean Difference (I-J)	Std. Error	Sig.
Teacher Effectiveness (Overall)	Bengali	English	-3.184*	.668	**.000**
		Bengali and English	-3.443*	.881	**.000**
	English	Bengali and English	-.259	.926	.780
TED1: Personal Qualities	Bengali	English	-.205	.171	.229
		Bengali and English	-1.174*	.225	**.000**
	English	Bengali and English	-.969*	.237	**.000**
TED2: Classroom Management Skills	Bengali	English	-.298*	.144	**.039**
		Bengali and English	-.501*	.190	**.009**
	English	Bengali and English	-.203	.200	.309
TED3: Instructional Planning and Implementation	Bengali	English	-.640*	.168	**.000**
		Bengali and English	-.528*	.222	**.018**
	English	Bengali and English	.112	.233	.632
TED4: Interpersonal Relation (Students, Colleagues, Parents)	Bengali	English	-.347*	.157	**.028**
		Bengali and English	-.502*	.207	**.016**
	English	Bengali and English	-.156	.218	.474
TED5: Professional Skills	Bengali	English	-.412*	.161	**.011**
		Bengali and English	-.001	.212	.995
	English	Bengali and English	.411	.223	.066

TED6: Digital Skills	Bengali	English	-1.283*	.197	**.000**
		Bengali and English	-.736*	.260	**.005**
	English	Bengali and English	.546*	.274	**.046**

* The mean difference is significant at the 0.05 level.

Interpretation

The above Table 5.38. (A) shows that in the case of overall teacher effectiveness, out of 644 secondary-level school teachers, the mean scores of 322 secondary-level school teachers from Bengali medium, 223 from English medium, and 99 from Bengali and English medium are 218.51, 221.69, and 221.95, respectively. It means that the secondary-level school teachers from Bengali and English medium face more overall teacher effectiveness than the other category of secondary-level school teachers. Further, the one-way ANOVA shows that (F=14.640, df=2/641 & p=.000<0.05) the result is significant. Hence, it indicates a significant difference in overall teacher effectiveness among secondary-level school teachers concerning the medium of instruction. Further, the multiple comparisons [see Table 5.38. (B)] on overall teacher effectiveness through LSD test showed that the actual differences lie between Bengali and English medium (p=.000<0.05) and Bengali medium and Bengali and English medium (p=.000<0.05) secondary-level school teachers.

In the case of personal qualities, the mean scores of 322 secondary-level school teachers from Bengali medium, 223 from English medium, and 99 from Bengali and English medium are 36.75, 36.95, and 37.92, respectively. It means that the Bengali and English medium secondary-level school teachers face more personal qualities than the other category secondary-level school teachers. Further, the one-way ANOVA shows that (F=13.694, df=2/641 & p=.000<0.05) the result is significant. Hence, it indicates a significant difference in personal qualities among secondary-level school teachers concerning the medium of instruction. Further, the multiple comparisons [see Table 5.38. (B)] on personal qualities through LSD test showed that the actual differences lie between Bengali and Bengali and English medium (p=.000<0.05) and English medium and Bengali and English medium (p=.000<0.05) secondary-level school teachers.

The result concerning classroom management skills, the mean scores of 322 secondary-level school teachers from Bengali medium, 223 from English medium, and 99 from Bengali and English medium are 31.99, 32.29, and 32.49, respectively. It means that the secondary-level school teachers from the Bengali and English medium show better classroom management skills than the other category of secondary-level school teachers.

Further, the one-way ANOVA shows that (F=4.340, df=2/641 & p=.013<0.05) the result is significant. Hence, it indicates a significant difference in classroom management skills among secondary-level school teachers concerning the medium of instruction. Further, the multiple comparisons [see Table 5.38. (B)] on classroom management skills through LSD test showed that the actual differences lie between Bengali and English medium (p=.039<0.05) and Bengali medium and Bengali and English medium (p=.009<0.05) secondary-level school teachers.

Concerning instructional planning and implementation, the mean scores of 322 secondary-level school teachers from Bengali medium, 223 from English medium, and 99 from Bengali and English medium are 45.75, 46.39, and 46.28, respectively. It means that secondary-level school teachers from the English medium face more instructional planning and implementation than the other category of secondary-level school teachers. Further, the one-way ANOVA shows that (F=8.030, df=2/641 & p=.000<0.05) the result is significant. Hence, it indicates a significant difference in instructional planning and implementation among secondary-level school teachers concerning the medium of instruction. Further, the multiple comparisons [see Table 5.38. (B)] on instructional planning and implementation through LSD test showed that the actual differences lie between Bengali and English medium (p=.000<0.05) and Bengali medium and Bengali and English medium (p=.018<0.05) secondary-level school teachers.

Regarding interpersonal relations (Students, Colleagues, Parents), the mean scores of 322 secondary-level school teachers from Bengali medium, 223 from English medium, and 99 from Bengali and English medium are 36.45, 36.79, and 36.95, respectively. It means that the secondary-level school teachers from the Bengali and English medium face more interpersonal relations (Students, Colleagues, Parents) compared to other category secondary-level school teachers. Further, the one-way ANOVA shows that (F=4.114, df=2/641 & p=.017<0.05) the result is significant. Hence, it indicates a significant difference in interpersonal relations (Students, Colleagues, Parents) among secondary-level school teachers concerning the medium of instruction. Further, the multiple comparisons [see Table 5.38. (B)] on interpersonal relations (Students, Colleagues, Parents), the LSD test showed that the actual differences lie between Bengali and English medium (p=.028<0.05) and Bengali medium and Bengali and English medium (p=.016<0.05) secondary-level school teachers.

In the case of professional skills, the mean scores of 322 secondary-level school teachers from Bengali medium, 223 from English medium, and 99 from Bengali and English medium are 36.74, 37.15, and 36.74, respectively. It means that English medium

secondary-level school teachers have more professional skills than the other category of secondary-level school teachers. Further, the one-way ANOVA shows that (F=3.635, df=2/641 & p=.027<0.05) the result is significant. Hence, it indicates a significant difference in professional skills among secondary-level school teachers concerning the medium of instruction. Further, the multiple comparisons [see Table 5.38. (B)] on professional skills through LSD test showed that the actual differences lie between Bengali and English medium (p=.011<0.05) secondary-level school teachers.

Regarding digital skills, the mean scores of 322 secondary-level school teachers from Bengali medium, 223 from English medium, and 99 from Bengali and English medium are 30.83, 32.11, and 31.57, respectively. This means English medium secondary-level school teachers face more digital skills than the other category of secondary-level school teachers. Further, the one-way ANOVA shows that (F=21.476, df=2/641 & p=.000<0.05) the result is significant. Hence, it indicates a significant difference in digital skills among secondary-level school teachers concerning the medium of instruction. Further, the multiple comparisons [see Table 5.38. (B)] on digital skills through LSD test showed that the actual differences lie between Bengali and English medium (p=.000<0.05), Bengali medium and Bengali and English medium (p=.005<0.05), and English medium and Bengali and English medium (p=.046<0.05) secondary-level school teachers.

5.2.10. Comparison of Teacher Effectiveness (Overall and Dimensions-wise) with Professional Factors among Secondary-Level School Teachers.

$H_0$6: There is no significant variation in teacher effectiveness (overall and dimensions-wise) among secondary-level school teachers concerning their professional factors.

5.2.10.1. Comparison of Teacher Effectiveness (Overall and Dimensions-wise) Concerning Highest Educational Qualification among Secondary-Level School Teachers

Table 5.39. (A) Highest Educational Qualification-wise Mean Comparison of Teacher Effectiveness (Overall and Dimensions-wise)

	Highest Educational Qualification	N	Mean	SD	SEM	F	df	*p*
Teacher Effectiveness (Overall)	Undergraduate (B. A, B.Sc. or B. Com)	113	218.81	9.189	.864	2.357	2/641	.096
	Postgraduate (M.A., M.Sc. or M. Com)	514	220.37	7.523	.332			

	Postmasters (M.Phil. or PhD)	17	222.06	6.067	1.471			
	Total	644	220.14	7.825	.308			
TED1: Personal Qualities	Undergraduate (B. A, B.Sc. or B. Com)	113	36.57	2.224	.209	3.302	2/641	**.037**
	Postgraduate (M.A., M.Sc. or M. Com)	514	37.10	1.933	.085			
	Postmasters (M.Phil. or PhD)	17	36.88	2.058	.499			
	Total	644	37.00	1.997	.079			
TED2: Classroom Management Skills	Undergraduate (B. A, B.Sc. or B. Com)	113	31.87	1.835	.173	2.613	2/641	.074
	Postgraduate (M.A., M.Sc. or M. Com)	514	32.23	1.616	.071			
	Postmasters (M.Phil. or PhD)	17	32.53	1.700	.412			
	Total	644	32.17	1.662	.065			
TED3: Instructional Planning and Implementation	Undergraduate (B. A, B.Sc. or B. Com)	113	45.69	1.904	.179	2.613	2/641	.074
	Postgraduate (M.A., M.Sc. or M. Com)	514	46.13	1.965	.087			
	Postmasters (M.Phil. or PhD)	17	46.41	1.661	.403			
	Total	644	46.06	1.952	.077			
TED4: Interpersonal Relation (Students, Colleagues, Parents)	Undergraduate (B. A, B.Sc. or B. Com)	113	36.48	2.079	.196	1.241	2/641	.290
	Postgraduate (M.A., M.Sc. or M. Com)	514	36.66	1.761	.078			
	Postmasters (M.Phil. or PhD)	17	37.18	1.237	.300			
	Total	644	36.64	1.810	.071			

TED5: Professional Skills	Undergraduate (B. A, B.Sc. or B. Com)	113	36.86	1.977	.186	.149	2/641	.862
	Postgraduate (M.A., M.Sc. or M. Com)	514	36.88	1.823	.080			
	Postmasters (M.Phil. or PhD)	17	37.12	1.933	.469			
	Total	644	36.88	1.851	.073			
TED6: Digital Skills	Undergraduate (B. A, B.Sc. or B. Com)	113	31.35	2.159	.203	.495	2/641	.610
	Postgraduate (M.A., M.Sc. or M. Com)	514	31.38	2.365	.104			
	Postmasters (M.Phil. or PhD)	17	31.94	2.680	.650			
	Total	644	31.39	2.337	.092			

Table 5.39. (B) Highest Educational Qualification-wise Multiple Comparison of Teacher Effectiveness (Overall and Dimensions-wise)

Dependent Variable	(I) Highest Educational Qualification	(J) Highest Educational Qualification	Mean Difference (I-J)	Std. Error	Sig.
Teacher Effectiveness (Overall)	Undergraduate (B. A, B.Sc. or B. Com)	Postgraduate (M.A., M.Sc. or M. Com)	-1.552	.811	.056
		Postmasters (M.Phil. /or PhD)	-3.245	2.031	.111
	Postgraduate (M.A., M.Sc. or M. Com)	Postmasters (M.Phil. or PhD)	-1.693	1.925	.379
TED1: Personal Qualities	Undergraduate (B. A, B.Sc. or B. Com)	Postgraduate (M.A., M.Sc. or M. Com)	-.529*	.207	**.011**
		Postmasters (M.Phil. or PhD)	-.316	.518	.542
	Postgraduate (M.A., M.Sc. or M. Com)	Postmasters (M.Phil. /or PhD)	.213	.491	.664

TED2: Classroom Management Skills	Undergraduate (B. A, B.Sc. or B. Com)	Postgraduate (M.A., M.Sc. or M. Com)	-.362*	.172	**.036**
		Postmasters (M.Phil. or PhD)	-.662	.431	.125
	Postgraduate (M.A., M.Sc. or M. Com)	Postmasters (M.Phil. or PhD)	-.300	.409	.463
TED3: Instructional Planning and Implementation	Undergraduate (B. A, B.Sc. or B. Com)	Postgraduate (M.A., M.Sc. or M. Com)	-.436*	.202	**.031**
		Postmasters (M.Phil. or PhD)	-.721	.507	.155
	Postgraduate (M.A., M.Sc. or M. Com)	Postmasters (M.Phil. or PhD)	-.285	.480	.553
TED4: Interpersonal Relation (Students, Colleagues, Parents)	Undergraduate (B. A, B.Sc. or B. Com)	Postgraduate (M.A., M.Sc. or M. Com)	-.186	.188	.324
		Postmasters (M.Phil. or PhD)	-.699	.471	.138
	Postgraduate (M.A., M.Sc. or M. Com)	Postmasters (M.Phil. or PhD)	-.513	.446	.251
TED5: Professional Skills	Undergraduate (B. A, B.Sc. or B. Com)	Postgraduate (M.A., M.Sc. or M. Com)	-.017	.193	.929
		Postmasters (M.Phil. or PhD)	-.259	.482	.591
	Postgraduate (M.A., M.Sc. or M. Com)	Postmasters (M.Phil. or PhD)	-.242	.457	.596
TED6: Digital Skills	Undergraduate (B. A, B.Sc. or B. Com)	Postgraduate (M.A., M.Sc. or M. Com)	-.022	.243	.930
		Postmasters (M.Phil. or PhD)	-.587	.609	.335
	Postgraduate (M.A., M.Sc. or M. Com)	Postmasters (M.Phil. or PhD)	-.566	.577	.327

* The mean difference is significant at the 0.05 level.

Interpretation

Table 5.39. (A) shows that in the case of overall teacher effectiveness, out of 644 secondary-level school teachers, the mean score of 113 secondary-level school teachers who have qualified undergraduate (B. A, B.Sc. or B. Com), 514 secondary-level school teachers qualified postgraduate (M.A., M.Sc. or M. Com) and 17 secondary-level school teachers qualified postmasters (M.Phil. or PhD) are 218.8, 220.37, and 222.06, respectively. It means that the secondary-level school teachers who have qualified postmasters (M.Phil. or PhD) face more overall teacher effectiveness than the other category of secondary-level school teachers. Further, the one-way ANOVA shows that ($F=2.357$, $df=2/641$ & $p=.096>0.05$) the result is not significant. Hence, it indicates no significant difference exists in overall teacher effectiveness among secondary-level school teachers concerning their highest educational qualification.

The result concerning personal qualities, the mean score of 113 secondary-level school teachers who have qualified undergraduate (B. A, B.Sc. or B. Com), 514 teachers who qualified postgraduate (M.A., M.Sc. or M. Com), and 17 teachers who qualified postmasters (M.Phil. or PhD) are 36.57, 37.10, and 36.88, respectively. It means that the secondary-level school teachers who have qualified postgraduate (M.A., M.Sc. or M. Com) show more personal qualities than the other category secondary-level school teachers. Further, the one-way ANOVA shows that ($F=3.302$, $df=2/641$ & $p=.037<0.05$) the result is significant. Hence, it indicates a significant difference in personal qualities among secondary-level school teachers concerning their highest educational qualification. Further, the multiple comparisons [see Table 5.39. (B)] on personal qualities through the LSD test showed that the actual differences lie between Undergraduate (B. A, B.Sc. or B. Com) and Postgraduate (M.A., M.Sc. or M. Com) ($p=.011<0.05$) secondary-level school teachers.

Regarding classroom management skills, the mean score of 113 secondary-level school teachers who have qualified undergraduate (B. A, B.Sc. or B. Com), 514 teachers who qualified postgraduate (M.A., M.Sc. or M. Com), and 17 teachers qualified postmasters (M.Phil. or PhD) are 31.87, 32.23, and 32.53, respectively. It means that secondary-level school teachers who have qualified postmasters (M.Phil. or PhD) face more classroom management skills compared to the other category of secondary-level school teachers. Further, the one-way ANOVA shows that ($F=2.613$, $df=2/641$ & $p=.074>0.05$) the result is not significant. Hence, it indicates no significant difference in classroom management skills among secondary-level school teachers concerning their highest educational qualification. Further, the multiple comparisons [see Table 5.39. (B)] on classroom

management skills through the LSD test showed that the actual differences lie between Undergraduate (B. A, B.Sc. or B. Com) and Postgraduate (M.A., M.Sc. or M. Com) (p=.036<0.05) secondary-level school teachers.

In the dimension of instructional planning and implementation, the mean score of 113 secondary-level school teachers who have qualified undergraduate (B. A, B.Sc. or B. Com), 514 teachers qualified postgraduate (M.A., M.Sc. or M. Com) and 17 teachers qualified postmasters (M.Phil. or PhD) are 45.69, 46.13, and 46.41, respectively. It means that the secondary-level school teachers who have qualified postmasters (M.Phil. or PhD) have more instructional planning and implementation quality compared to the other category of secondary-level school teachers. Further, the one-way ANOVA shows that (F=2.613, df=2/641 & p=.074>0.05) the result is not significant. Hence, it indicates no significant difference in instructional planning and implementation among secondary-level school teachers concerning their highest educational qualification. Further, the multiple comparisons [see Table 5.39. (B)] on planning and implementation through LSD test showed that the actual differences lie between Undergraduate (B. A, B.Sc. or B. Com) and Postgraduate (M.A., M.Sc. or M. Com) (p=.031<0.05) secondary-level school teachers.

In the interpersonal relation (Students, Colleagues, Parents) dimension, the mean score of 113 secondary-level school teachers who have qualified undergraduate (B. A, B.Sc. or B. Com), 514 teachers qualified postgraduate (M.A., M.Sc. or M. Com) and 17 teachers qualified postmasters (M.Phil. or PhD) are 36.48, 36.66, and 37.18, respectively. It means that the secondary-level school teachers who have qualified postmasters (M.Phil. or PhD) have better interpersonal relations (Students, Colleagues, Parents) than the other category of secondary-level school teachers. Further, the one-way ANOVA shows that (F=1.241, df=2/641 & p=.290>0.05) the result is not significant. Hence, it indicates no significant difference in interpersonal relations (Students, Colleagues, Parents) among secondary-level school teachers concerning their highest educational qualification.

In the case of professional skills, the mean score of 113 secondary-level school teachers who have qualified undergraduate (B. A, B.Sc. or B. Com), 514 teachers who qualified postgraduate (M.A., M.Sc. or M. Com) and 17 teachers qualified postmasters (M.Phil. or PhD) are 36.86, 36.88, and 37.12, respectively. It means that the secondary-level school teachers who have qualified postmasters (M.Phil. or PhD) have more professional skills compared to the other category of secondary-level school teachers. Further, the one-way ANOVA shows that (F=.149, df=2/641 & p=.862>0.05) the result is not significant. Hence, it indicates no significant difference in professional skills among secondary-level school teachers concerning their highest educational qualification.

Concerning digital skills, the mean score of 113 secondary-level school teachers who have qualified undergraduate (B. A, B.Sc. or B. Com), 514 teachers who qualified postgraduate (M.A., M.Sc. or M. Com), and 17 teachers qualified postmasters (M.Phil. or PhD) are 31.35, 31.38, and 31.94, respectively. It means that the secondary-level school teachers who have qualified postmasters (M.Phil. or PhD) have more digital skills compared to the other category of secondary-level school teachers. Further, the one-way ANOVA shows that (F=.495, df=2/641 & p=.610>0.05) the result is not significant. Hence, it indicates no significant difference in digital skills among secondary-level school teachers concerning their highest educational qualification.

5.2.10.2. Comparison of Teacher Effectiveness (Overall and Dimensions-wise) Concerning Stream of Education

Table 5.40. (A) Stream of Education-wise Mean Comparison of Teacher Effectiveness (Overall and Dimensions-wise)

	Stream of Education	N	Mean	SD	SEM	F	df	*p*
Teacher Effectiveness (Overall)	Arts	345	220.10	7.894	.425	2.797	2/641	.062
	Science	261	219.77	8.011	.496			
	Commerce	38	222.97	4.956	.804			
	Total	644	220.14	7.825	.308			
TED1: Personal Qualities	Arts	345	36.97	1.987	.107	2.797	2/641	.150
	Science	261	36.94	2.097	.130			
	Commerce	38	37.61	1.128	.183			
	Total	644	37.00	1.997	.079			
TED2: Classroom Management Skills	Arts	345	32.18	1.704	.092	.877	2/641	.417
	Science	261	32.12	1.621	.100			
	Commerce	38	32.50	1.555	.252			
	Total	644	32.17	1.662	.065			
TED3: Instructional Planning and Implementation	Arts	345	46.05	1.877	.101	.438	2/641	.645
	Science	261	46.03	2.091	.129			
	Commerce	38	46.34	1.632	.265			
	Total	644	46.06	1.952	.077			
TED4: Interpersonal Relation (Students, Colleagues, Parents)	Arts	345	36.55	1.926	.104	3.578	2/641	**.028**
	Science	261	36.67	1.696	.105			
	Commerce	38	37.37	1.282	.208			
	Total	644	36.64	1.810	.071			
	Arts	345	36.97	1.835	.099	.918	2/641	.400
	Science	261	36.76	1.858	.115			

TED5: Professional Skills	Commerce	38	36.87	1.948	.316			
	Total	644	36.88	1.851	.073			
TED6: Digital Skills	Arts	345	31.38	2.287	.123	3.238	2/641	**.040**
	Science	261	31.26	2.437	.151			
	Commerce	38	32.29	1.902	.309			
	Total	644	31.39	2.337	.092			

Table 5.40. (B) Stream of Education-wise Multiple Comparison of Teacher Effectiveness (Overall and Dimensions-wise)

Dependent Variable	(I) Stream of Education	(J) Stream of Education	Mean Difference (I-J)	Std. Error	Sig.
Teacher Effectiveness (Overall)	Arts	Science	.328	.640	.609
		Commerce	-2.872*	1.334	**.032**
	Science	Commerce	-3.200*	1.355	**.018**
TED1: Personal Qualities	Arts	Science	.035	.164	.830
		Commerce	-.631	.341	.064
	Science	Commerce	-.667	.346	.055
TED2: Classroom Management Skills	Arts	Science	.061	.136	.655
		Commerce	-.320	.284	.260
	Science	Commerce	-.381	.289	.187
TED3: Instructional Planning and Implementation	Arts	Science	.022	.160	.889
		Commerce	-.293	.334	.381
	Science	Commerce	-.315	.339	.353
TED4: Interpersonal Relation (Students, Colleagues, Parents)	Arts	Science	-.119	.148	.422
		Commerce	-.821*	.308	**.008**
	Science	Commerce	-.702*	.313	**.025**
TED5: Professional Skills	Arts	Science	.206	.152	.176
		Commerce	.100	.316	.753
	Science	Commerce	-.106	.321	.742
TED6: Digital Skills	Arts	Science	.122	.191	.523
		Commerce	-.907*	.398	**.023**
	Science	Commerce	-1.029*	.404	**.011**

***** The mean difference is significant at the 0.05 level.

Interpretation

The above Table 5.40. (A) shows that in the case of overall teacher effectiveness, out of 644 secondary-level school teachers, the mean scores of 345 teachers from arts, 261 from

science, and 38 from commerce stream are 220.10, 219.77, and 222.97, respectively. It means that the secondary-level school teachers from the commerce stream have more overall teacher effectiveness than the other category of secondary-level school teachers. Further, the one-way ANOVA shows that (F=2.797, df=2/641 & p=.062>0.05) the result is not significant. Hence, it indicates no significant difference in overall teacher effectiveness among secondary-level school teachers concerning the stream of education. Further, the multiple comparisons [see Table 5.40. (B)] on overall teacher effectiveness through the LSD, test showed that the actual differences lie between the arts and commerce stream (p=.032<0.05) and science and commerce stream (p=.018<0.05) secondary-level school teachers.

In the case of personal qualities, the mean scores of 345 secondary-level school teachers from arts, 261 from science, and 38 from commerce stream are 36.97, 36.94, and 37.61, respectively. It means that the secondary-level school teachers from the commerce stream have more personal qualities than the other category of secondary-level school teachers. Further, the one-way ANOVA shows that (F=2.797, df=2/641 & p=.150>0.05) the result is not significant. Hence, it indicates no significant difference in personal qualities among secondary-level school teachers concerning the stream of education.

Regarding the classroom management skill dimension, the mean scores of 345 secondary-level school teachers from arts, 261 from science, and 38 from commerce stream are 32.18, 32.12, and 32.50, respectively. It means that the secondary-level school teachers from the commerce stream have more classroom management skills than the other category of secondary-level school teachers. Further, the one-way ANOVA shows that (F=.877, df=2/641 & p=.417>0.05) the result is not significant. Hence, it indicates no significant difference in classroom management skills among secondary-level school teachers concerning the stream of education.

The result concerning instructional planning and implementation, the mean scores of 345 secondary-level school teachers from arts, 261 from science, and 38 from commerce stream are 46.05, 46.03, and 46.34, respectively. It means that the secondary-level school teachers from the commerce stream have more instructional planning and implementation skills compared to the arts and science stream secondary-level school teachers. Further, the one-way ANOVA shows that (F=.438, df=2/641 & p=.645>0.05) the result is not significant. Hence, it indicates no significant difference in instructional planning and implementation among secondary-level school teachers concerning the stream of education.

Another result shows that in the case of interpersonal relations (Students, Colleagues, Parents), the mean scores of 345 secondary-level school teachers from arts, 261 from science, and 38 from commerce stream are 36.55, 36.67, and 37.37, respectively. It means that the secondary-level school teachers from the commerce stream have better interpersonal relations (Students, Colleagues, Parents) than the other category of secondary-level school teachers. Further, the one-way ANOVA shows that (F=3.578, df=2/641 & p=.028<0.05) the result is significant. Hence, it indicates a significant difference in interpersonal relations (Students, Colleagues, Parents) among secondary-level school teachers concerning the stream of education. Further, the multiple comparisons [see Table 5.40. (B)] on interpersonal relations (Students, Colleagues, Parents) through the LSD test showed that the actual differences lie between the arts and commerce stream (p=.008<0.05) and the science and commerce stream (p=.025<0.05) secondary-level school teachers.

The result concerning professional skills, the mean scores of 345 secondary-level school teachers from arts, 261 from science, and 38 from commerce stream are 36.97, 36.76, and 36.87, respectively. It means that the secondary-level school teachers from the arts stream have more professional skills compared to the commerce and science stream secondary-level school teachers. Further, the one-way ANOVA shows that (F=.918, df=2/641 & p=.400>0.05) the result is not significant. Hence, it indicates no significant difference in professional skills among secondary-level school teachers concerning the stream of education.

The result revealed that in the dimension of digital skills, the mean scores of 345 secondary-level school teachers from arts, 261 from science, and 38 from commerce stream are 31.38, 31.26, and 32.29, respectively. It means that the secondary-level school teachers from the commerce stream have more digital skills compared to the other category of secondary-level school teachers. Further, the one-way ANOVA shows that (F=3.238, df=2/641 & p=.040<0.05) the result is significant. Hence, it indicates a significant difference in digital skills among secondary-level school teachers concerning the stream of education. Further, the multiple comparisons [see Table 5.40. (B)] on digital skills through the LSD, test showed that the actual differences lie between the arts and commerce stream (p=.023<0.05) and science and commerce stream (p=.011<0.05) secondary-level school teachers.

5.2.10.3. Relationship between Year of Teaching Experience and Teacher Effectiveness (Overall and Dimensions-wise) among secondary-level school teachers

Table 5.41. Relationship between Year of Teaching Experience and Teacher Effectiveness (Overall and Dimensions-wise)

	Year of Teaching Experience	
	r	***p***
Teacher Effectiveness (Overall)	-.038	.336
TED1: Personal Qualities	.039	.328
TED2: Classroom Management Skills	.016	.682
TED3: Instructional Planning and Implementation	-.016	.692
TED4: Interpersonal Relation (Students, Colleagues, Parents)	-.018	.655
TED5: Professional Skills	-.068	.086
TED6: Digital Skills	-.091*	**.021**

* Correlation is significant at the 0.05 level (2-tailed).

Interpretation

Table 5.41. shows a relationship between teaching experience and overall and dimensions-wise teacher effectiveness among secondary-level school teachers. The result shows a low negative and insignificant relationship was found between teaching experience and overall teacher effectiveness among secondary-level school teachers (i.e., r=-.038, *p*=.336>0.05). The result shows a low positive and insignificant relationship between teaching experience and personal qualities dimensions of teacher effectiveness among secondary-level school teachers (i.e., r=.039, *p*=.328>0.05). At the same time, a low positive and insignificant relationship between teaching experience and classroom management skill dimensions of teacher effectiveness among secondary-level school teachers (i.e., r=.016, *p*=.682>0.05). The result revealed that a low negative and insignificant relationship was found between teaching experience and instructional planning and implementation dimensions of teacher effectiveness among secondary-level school teachers (i.e., r=-.016, *p*=.692>0.05). The result also found that a low negative and insignificant relationship was found between teaching experience and interpersonal relation (Students, Colleagues, Parents) dimensions of teacher effectiveness among secondary-level school teachers (i.e., r=-.018, *p*=.655>0.05). The result also shows a low negative and insignificant relationship between teaching experience and professional skills dimensions of teacher effectiveness among secondary-level school teachers (i.e., r=-.068, *p*=.086>0.05). The result shows a low negative but significant relationship between teaching experience and digital skills

dimensions of teacher effectiveness among secondary-level school teachers (i.e., r=-.091, p=.021<0.05).

5.2.10.4. Comparison of Teacher Effectiveness (Overall and Dimensions-wise) Concerning ICT Orientation

Table 5.42. ICT Orientation-wise Mean Comparison of Teacher Effectiveness (Overall and Dimensions- wise)

	ICT Orientation	N	Mean	SD	SEM	t	df	*p*
Teacher Effectiveness (Overall)	Yes	389	221.39	7.102	.360	5.093	642	**.000**
	No	255	218.24	8.482	.531			
TED1: Personal Qualities	Yes	389	37.21	1.863	.094	3.385	642	**.001**
	No	255	36.67	2.148	.135			
TED2: Classroom Management Skills	Yes	389	32.34	1.502	.076	3.240	642	**.001**
	No	255	31.91	1.853	.116			
TED3: Instructional Planning and Implementation	Yes	389	46.29	1.914	.097	3.694	642	**.000**
	No	255	45.71	1.963	.123			
TED4: Interpersonal Relation (Students, Colleagues, Parents)	Yes	389	36.83	1.652	.084	3.243	642	**.001**
	No	255	36.36	1.999	.125			
TED5: Professional Skills	Yes	389	37.06	1.800	.091	3.161	642	**.002**
	No	255	36.60	1.894	.119			
TED6: Digital Skills	Yes	389	31.65	2.268	.115	3.569	642	**.000**
	No	255	30.98	2.388	.150			

Interpretation

Table 5.42. shows that in the case of overall teacher effectiveness, out of 644 secondary-level school teachers, the mean score of 389 secondary-level school teachers who are ICT-oriented scored higher (i.e., 221.39) than 255 non-ICT-oriented secondary-level school teachers (i.e., 218.24). It means that secondary-level school teachers who are ICT-oriented

face more overall teacher effectiveness than those who have non-ICT-oriented secondary-level school teachers. Further, the t-test shows that (t=5.093, df=642, p=.000<0.05) the result is significant. It indicates a significant difference exists in overall teacher effectiveness among secondary-level school teachers concerning their ICT orientation.

Regarding personal qualities, the mean score of 389 ICT-oriented secondary-level school teachers scored higher (i.e., 37.21) than 255 non-ICT-oriented secondary-level school teachers (i.e., 36.67). It means that secondary-level school teachers who are ICT-oriented show more personal qualities than those who have non-ICT-oriented secondary-level school teachers. Further, the t-test shows that (t=3.385, df=642 & p=.001<0.05) the result is significant. Hence, it indicates a significant difference exists in personal qualities among secondary-level school teachers concerning their ICT orientation.

In the case of classroom management skills, the mean scores of 389 secondary-level school teachers who are ICT-oriented scored higher (i.e.,32.34) than 255 non-ICT-oriented secondary-level school teachers (i.e., 31.91). It means that secondary-level school teachers who have ICT-oriented better classroom management skills than those who have non-ICT-oriented secondary-level school teachers. Further, the t-test shows that (t=3.240, df=642 & p=.001<0.05) the result is significant. Hence, it indicates a significant difference exists in classroom management skills among secondary-level school teachers concerning their ICT orientation.

The result concerning instructional planning and implementation, the mean score of 389 secondary-level school teachers who are ICT-oriented scored higher (i.e., 46.29) than 255 non-ICT-oriented secondary-level school teachers (i.e., 45.71). It means that secondary-level school teachers who are ICT-oriented show more instructional planning and implementation than those who have non-ICT-oriented secondary-level school teachers. Further, the t-test shows that (t=3.694, df=642 & p=.000<0.05) the result is significant. Hence, it indicates a significant difference exists in instructional planning and implementation among secondary-level school teachers concerning their ICT orientation.

Regarding interpersonal relations (Students, Colleagues, Parents), the mean score of 389 secondary-level school teachers who are ICT-oriented scored higher (i.e., 36.83) than 255 non-ICT-oriented secondary-level school teachers (i.e., 36.36). It means that the teachers who have ICT-oriented secondary-level school teachers face more interpersonal relations (Students, Colleagues, Parents) than those who have non-ICT-oriented secondary-level school teachers. Further, the t-test shows that (t=3.243, df=642 & p=.001<0.05) the result is significant. Hence, it indicates a significant difference exists in interpersonal relations

(Students, Colleagues, Parents) among secondary-level school teachers concerning their ICT orientation.

In the dimension of professional skills, the mean score of 389 secondary-level school teachers who are ICT-oriented scored higher (i.e., 37.06) than 255 non-ICT-oriented secondary-level school teachers (i.e., 36.60). It means that secondary-level school teachers who are ICT-oriented face more professional skills than those who have non-ICT-oriented secondary-level school teachers. Further, the t-test shows that (t=3.161, df=642 & p=.002<0.05) the result is significant. Hence, it indicates a significant difference exists in professional skills among secondary-level school teachers concerning their ICT orientation.

The result concerning digital skills, the mean score of 389 secondary-level school teachers who are ICT-oriented scored higher (i.e., 31.65) than 255 non-ICT-oriented secondary-level school teachers (i.e., 30.98). It means that secondary-level school teachers who are ICT-oriented face more digital skills than those who have non-ICT-oriented secondary-level school teachers. Further, the t-test shows that (t=3.569, df=642 & p=.000<0.05) the result is significant. Hence, it indicates a significant difference exists in digital skills among secondary-level school teachers concerning their ICT orientation.

5.2.10.5. Comparison of Teacher Effectiveness (Overall and Dimensions-wise) Concerning ICT Orientation

Table 5.43. ICT Orientation-wise Mean Comparison of Teacher Effectiveness (Overall and Dimensions-wise)

	Professional Course	N	Mean	SD	SEM	t	df	*p*
Teacher Effectiveness (Overall)	Bachelor's Degree (B.Ed. or B. P. Ed.)	601	220.09	7.931	.324	-.650	642	.519
	Master's Degree (M.Ed. or M. P. Ed.)	43	220.74	6.199	.945			
TED1: Personal Qualities	Bachelor's Degree (B.Ed. or B. P. Ed.)	601	36.98	1.975	.081	-.563	642	.576
	Master's Degree	43	37.19	2.302	.351			

	(M.Ed. or M. P. Ed.)							
TED2: Classroom Management Skills	Bachelor's Degree (B.Ed. or B. P. Ed.)	601	32.16	1.681	.069	-.618	642	.539
	Master's Degree (M.Ed. or M. P. Ed.)	43	32.30	1.389	.212			
TED3: Instructional Planning and Implementation	Bachelor's Degree (B.Ed. or B. P. Ed.)	601	46.04	1.989	.081	-1.434	642	.157
	Master's Degree (M.Ed. or M. P. Ed.)	43	46.35	1.325	.202			
TED4: Interpersonal Relation (Students, Colleagues, Parents)	Bachelor's Degree (B.Ed. or B. P. Ed.)	601	36.64	1.842	.075	.501	642	.619
	Master's Degree (M.Ed. or M. P. Ed.)	43	36.74	1.311	.200			
TED5: Professional Skills	Bachelor's Degree (B.Ed. or B. P. Ed.)	601	36.85	1.853	.076	-1.514	642	.137
	Master's Degree (M.Ed. or M. P. Ed.)	43	37.28	1.791	.273			
TED6: Digital Skills	Bachelor's Degree (B.Ed. or B. P. Ed.)	601	31.42	2.330	.095	1.418	642	.163
	Master's Degree (M.Ed. or M. P. Ed.)	43	30.88	2.412	.368			

Interpretation

Table 5.43. shows that in the case of overall teacher effectiveness, out of 644 secondary-level school teachers, the mean score of 601 secondary-level school teachers who have bachelor's degree (B.Ed. or B. P. Ed.) (i.e., 220.09) is less than the mean score of 43 secondary-level school teachers who have master's degree (M.Ed. or M. P. Ed.) (i.e., 220.74). It means that secondary-level school teachers who have master's degrees (M.Ed. or M. P. Ed.) face more overall teacher effectiveness than those who have bachelor's degrees (B.Ed. or B. P. Ed.). Further, the t-test shows that (t=-.650, df=642 & p=.519>0.05) the result is not significant. Hence, it indicates no significant difference exists in overall teacher effectiveness among secondary-level school teachers concerning their professional course.

The result concerning personal qualities, the mean score of 601 secondary-level school teachers who have bachelor's degree (B.Ed. or B. P. Ed.) (i.e., 36.98) is less than the mean score of 43 secondary-level school teachers who have master's degree (M.Ed. or M. P. Ed.) (i.e., 37.19). It means that secondary-level school teachers who have master's degrees (M.Ed. or M. P. Ed.) have better personal qualities than those who have bachelor's degrees (B.Ed. or B. P. Ed.). Further, the t-test shows that (t=- .563, df=642 & p=.576>0.05) the result is not significant. Hence, it indicates no significant difference exists in personal qualities among secondary-level school teachers concerning their professional course.

Regarding role classroom management skills, the mean score of 601 secondary-level school teachers who have bachelor's degree (B.Ed. or B. P. Ed.) course (i.e., 32.16) is less than the mean score of 43 secondary-level school teachers who have master's degree (M.Ed. or M. P. Ed.) (i.e., 32.30). It means that secondary-level school teachers who have master's degree (M.Ed. or M. P. Ed.) courses face more classroom management skills than those who have bachelor's degrees (B.Ed. or B. P. Ed.). Further, the t-test shows that (t=-.618, df=642 & p=.539>0.05) the result is not significant. Hence, it indicates no significant difference exists in classroom management skills among secondary-level school teachers concerning their professional course.

In the instructional planning and implementation dimension, the mean score of 601 secondary-level school teachers who have bachelor's degree (B.Ed. or B. P. Ed.) course (i.e., 46.04) is less than the mean score of 43 secondary-level school teachers who have master's degree (M.Ed. or M. P. Ed.) course (i.e., 46.35). It means that the secondary-level school teachers who have master's degree (M.Ed. or M. P. Ed.) courses show more instructional planning and implementation than those who have bachelor's degree (B.Ed. or B. P. Ed.) courses. Further, the t-test shows that (t=-1.434, df=642 & p=.157>0.05) the

result is not significant. Hence, it indicates no significant difference exists in instructional planning and implementation among secondary-level school teachers concerning their professional courses.

In the dimension of interpersonal relations (Students, Colleagues, Parents), the mean score of 601 secondary-level school teachers who have bachelor's degree (B.Ed. or B. P. Ed.) course (i.e., 36.64) is less than the mean score of 43 secondary-level school teachers who have master's degree (M.Ed. or M. P. Ed.) course (i.e., 36.74). It means that the secondary-level school teachers who have master's degrees (M.Ed. or M. P. Ed.) have better interpersonal relations (Students, Colleagues, Parents) than those who have bachelor's degrees (B.Ed. or B. P. Ed.) courses. Further, the t-test shows that (t=.501, df=642 & p=.619>0.05) the result is not significant. Hence, it indicates no significant difference exists in interpersonal relations (Students, Colleagues, Parents) among secondary-level school teachers concerning their professional course.

The above table also shows that in the dimension of professional skills, the mean score of 601 secondary-level school teachers who have bachelor's degree (B.Ed. or B. P. Ed.) course (i.e., 36.85) is less than the mean score of 43 secondary-level school teachers who have master's degree (M.Ed. or M. P. Ed.) course (i.e., 37.28). It means that secondary-level school teachers who have master's degrees (M.Ed. or M. P. Ed.) course face more professional skills than those who have bachelor's degrees (B.Ed. or B. P. Ed.) course. Further, the t-test shows that (t=-1.514, df=642 & p=.137>0.05) the result is not significant. Hence, it indicates no significant difference exists in professional skills among secondary-level school teachers concerning their professional course.

Regarding digital skills, the mean score of 601 secondary-level school teachers who have bachelor's degrees (B.Ed. or B. P. Ed.) course (i.e., 31.42) is greater than the mean score of 43 secondary-level school teachers who have master's degree (M.Ed. or M. P. Ed.) course (i.e., 30.88). It means that secondary-level school teachers who have bachelor's degrees (B.Ed. or B. P. Ed.) course show more professional skills than those who have master's degrees (M.Ed. or M. P. Ed.) course. Further, the t-test shows that (t=1.418, df=642 & p=.163>0.05) the result is not significant. Hence, it indicates no significant difference exists in digital skills among secondary-level school teachers concerning their professional courses.

5.2.11. Relationship between Workload, Self-efficacy, and Teacher Effectiveness among Secondary-level School Teachers

$H_0$7: There is no significant relationship between workload, self-efficacy, and teacher effectiveness among secondary-level school teachers.

5.2.11.1. Relationship between Workload, Self-Efficacy, and Tacher Effectiveness

Table 5.44. Relationship between Workload, Self-efficacy, and Teacher Effectiveness

		Self-Efficacy	Teacher Effectiveness
Workload	r	-.063	-.061
	p	.109	.125
	N	644	644
Self-Efficacy	r		.456**
	p		.000
	N		644

** Correlation is significant at the 0.01 level (2-tailed).

Interpretation

Table No. 5.44. shows the relationship between workload, self-efficacy and teacher effectiveness among secondary-level school teachers. The result shows that a low negative and insignificant relationship between workload and self-efficacy among secondary-level school teachers (i.e., r=-.063, *p*=.109>0.05).

The same table shows that a low negative and insignificant relationship between workload and teacher effectiveness among secondary-level school teachers (i.e., r=-.061, *p*=.125>0.05).

Also, the table shows that a low positive and but significant relationship between self-efficacy and teacher effectiveness among secondary-level school teachers (i.e., r=.456, *p*= .000<0.05).

5.2.12. Effect of Potential Predictiveness

Mediation Analysis

The relationship between two constructs may happen indirectly via a third variable known as a mediator. In this scenario, the third variable will affect the relationship between the two constructs (Hair et al., 2009). When examining mediation, it is essential to understand three critical concepts:

Total effect: It denotes the relationship between an independent variable and a dependent variable. In the presence of a mediator, the total effect is the combined influence of the

direct effect between two constructs and the indirect effect conducted through the mediator (c'= c+a*b).

Direct effect: The direct effect refers to the relationship between an independent variable and a dependent variable, considering the influence of any moderator.

Indirect effect: It refers to the influence of an independent variable on a dependent variable via a third mediating variable. The relationship progresses from an independent variable to a mediator and subsequently to a dependent variable, determined by the product of path-a and path-b (i.e., a*b).

To know the total, direct and indirect effects of workload on teacher effectiveness, the regression analysis was run through the Hayes Process Macro in SPSS. Accordingly, the mediating effect of self-efficacy between workload and teacher effectiveness was assessed among 644 secondary-level school teachers. The Hayes Model-4 was run because there was present only one dependent variable (i.e., teacher effectiveness), independent variable (i.e., workload), and mediator (i.e., self-efficacy). In the present study, the three variables were continuous, almost normally distributed, and intercorrelated, satisfying the assumptions for regression analysis. The regression analysis results, conducted using the Hayes Process Macro, are presented in the table and figure below.

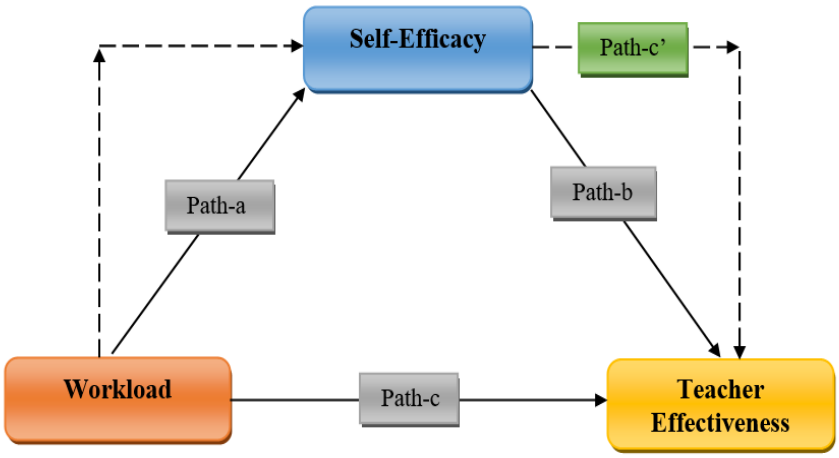


Figure 5.4. Model of Mediation Analysis and the Path Co-efficient

5.2.12.1. Direct Effect of Workload on Self-Efficacy

5.2.12.2. Direct Effect of Workload on Teacher Effectiveness

5.2.12.3. Direct Effect of Self-Efficacy on Teacher Effectiveness

5.2.12.4. There is no significant effect (direct and indirect or mediating) of workload on teacher effectiveness among secondary-level school teachers.

Table 5.45. Mediation Analysis Model Summary

Model (Paths)	Out Come	Predictor/s	R	R Square	F (*p*)	Coeff	t (*p*)	LLCI	ULCI
Model-1 (Path-a)	SE	WL	.063	.004	2.573 (.109)	-.025	-1.604 (.109)	-.056	.006
Model-2 (Path-b)	TE	SE	.456	.208	168.195 (.000)	.640	12.969 (.000)	.543	.737
In the Presence of SE(M)	TE	WL	.457	.209	84.484 (.000)	-.032	-.905 (.366)	-.057	.021
		SE				.638	12.884 (.000)	.540	.735
Model-3 (Path-c)	TE	WL	.061	.004	2.361 (.125)	-.034	-1.537 (.125)	-.078	.009

Effect Size						
	Description	**Coefficient**	**t**	***p***	**LLCI**	**ULCI**
	Total effect of X on Y	-.034	-1.537	.125	-.078	.009
	Direct effect of X on Y	-.018	-.905	.366	-.057	.021
		Effect	BootSE	BootLLCI		BootULCI
Path-c’	Indirect effect(s) of X on Y	-.016	.011	-.037		.004

Note: Level of confidence for all confidence intervals in the output: 95.0000

Number of bootstrap samples for percentile bootstrap confidence intervals: 5000

Model Breakdown Results:

Model-1 (Path-a): Direct Effect of Workload on Self-Efficacy

Haye’s regression analysis result showed that the loading (i.e., R) between workload and self-efficacy is .063, and the path coefficient is -.025, which means workload and self-efficacy of the participants are negatively and not significantly related (t=-1.604, *p*=.109).

It also showed that the R-square value between the two is .004, and the path is significant (F=2.573 and *p*=.109). Therefore, the analysis indicates that workload does not significantly effect self-efficacy among secondary-level school teachers.

Model-2 (Path-b): Direct Effect of Self-Efficacy on Teacher Effectiveness

Haye's regression analysis showed that the R-value between self-efficacy and teacher effectiveness is .456. The coefficient value is .640, which means the secondary-level school teacher's self-efficacy and teacher effectiveness are positively and significantly related (t=12.969, *p*=.000). It also showed that the R-square value between the two is .208. The path is significant (F=168.195, *p*=.000). That means only 2.08% of the change in teacher effectiveness is accounted for by self-efficacy among secondary-level school teachers.

Model-3 (Path-c): Direct Effect of Workload on Teacher Effectiveness

To know the direct effect of workload on teacher effectiveness, Haye's regression analysis was run separately, and the result showed that the R-value between workload and teacher effectiveness is .061. The path coefficient is -.034, which means workload and teacher effectiveness of the participants are negatively and not significantly related (t=-1.537, *p*=.125). It also showed that the R-square value between the two is .004, and the path is insignificant (F=2.361, *p*=.125). Therefore, the analysis indicates that workload does not significantly effect teacher effectiveness among secondary-level school teachers.

Further, in the presence of self-efficacy, the R-value between workload and teacher effectiveness is .457, and the path coefficient is -.032 (which is the direct effect in the present case). The path is significant (F=84.484 and *p*=.000). It also showed that the R-square value is .209, which means 2.09% of the variation in teacher effectiveness is accounted by workload in the presence of self-efficacy. This means workload directly influences teacher effectiveness among secondary-level school teachers.

The Total Effect of Workload on Teacher Effectiveness

The total effect of workload on teacher effectiveness is the sum of the direct and indirect effect, and it is calculated by adding the path-c with the product of path-a and path-b {i.e., c+(a*b)}. The coefficient of path-a is -.025, path-b is -.034, and path-c is .640. Therefore, the total effect of workload on teacher effectiveness is .640 (c+a*b or .640+-.025*-.034). This total effect is not significant (t=-1.537, *p*=.125), where the Lower-Level Confidence Interval (LLCI) is -.078 and the Upper-Level Confidence Interval (ULCI) is .009.

Model-4 (Path-c'): Indirect effect of Workload on TE through SE

Table 5.46. Represents the Mediating Effect of Workload on Teacher Effectiveness through Self-Efficacy

Relationship	Total Effect	Direct Effect	Indirect Effect	Confidence Levels		Conclusion
				LLCI	ULCI	
Workload=>SE=>TE	-.034 *p*=.125	-.018 *p*=.366	-.016	-.037	.004	Not Significant

Interpretation

Haye's regression analysis revealed that self-efficacy does not mediate the relationship between workload and teacher effectiveness, as shown by the confidence interval (LLCI= -.037 and ULCI= .004). The indirect effect of self-efficacy is close to zero and statistically not significant, indicating that it does not serve as a mediator in this model.

CHAPTER-VI

MAJOR FINDINGS AND CONCLUSION

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6.1.0. Introduction

The 'major findings and conclusion' section is essential in any research report. The primary purpose of this chapter is to synthesise the entire thesis and provide a comprehensive summary of the research (Murray, 2017). This chapter compares the research findings with existing theory, facilitating the drawing of meaningful conclusions (Evans, Gruba, & Zobel, 2011). The researcher has now reached this pivotal stage, following the progression established in the previous chapters. This chapter comprises five sub-sections: the major findings, discussion of the major findings, educational implications, limitations, and suggestions for future research.

6.2.0. Major Findings of the Study

Based on the analysis and interpretations discussed in the previous chapter, the following major findings were drawn:

6.2.1. Prevalence Rate of Workload among Secondary-Level School Teachers

1. Most of the secondary-level school teachers have average workload.

6.2.2. Variations in Workload among Secondary-Level School Teachers Concerning the Demographic Factors

1. There is a low positive but significant correlation between in workload and age among secondary-level school teachers.
2. There is a significant variation in workload among secondary-level school teachers concerning their gender.
3. There is no significant variation in workload among secondary-level school teachers concerning their present residence.
4. There is a significant variation in workload among secondary-level school teachers concerning their marital status.
5. There is no significant variation in workload among secondary-level school teachers concerning the locality of schools.
6. There is a significant variation in workload among secondary-level school teachers concerning the board of schools.

7. There is no significant variation in workload among secondary-level school teachers concerning the category of schools.
8. There is a significant variation in workload among secondary-level school teachers concerning the medium of instruction.

6.2.3. Variations in Workload among Secondary-Level School Teachers Concerning the Professional Factors

1. There is no significant variation in workload among secondary-level school teachers concerning their highest educational qualification.
2. There is a significant variation in workload among secondary-level school teachers concerning the stream of education.
3. A positive but insignificant correlation is present between teaching experience and the workload of secondary-level school teachers.
4. There is no significant variation in workload among secondary-level school teachers concerning their ICT orientation.
5. There is no significant variation in workload among secondary-level school teachers concerning their professional courses.

6.2.4. Prevalence Rate of Self-Efficacy among Secondary-Level School Teachers

1. Most of the secondary-level school teachers have average self-efficacy.

6.2.5. Differences in Self-Efficacy (Overall and Dimensions Wise) among Secondary-Level School Teachers Concerning the Demographic Factors

1. There is a low negative and insignificant correlation between age and overall self-efficacy, and efficacy expectation and outcome expectation dimensions of self-efficacy among secondary-level school teachers.
2. There is a low positive and insignificant correlation between age and self-confidence and positive attitude dimensions of self-efficacy among secondary-level school teachers.
3. There is no significant difference in overall self-efficacy and self-confidence, efficacy expectation, positive attitude, and outcome expectation dimensions of self-efficacy among secondary-level school teachers concerning their gender.
4. There is a significant difference in overall self-efficacy and self-confidence, efficacy expectation, positive attitude, and outcome expectation dimensions of self-efficacy among secondary-level school teachers concerning their present residence.

5. There is a significant difference in overall self-efficacy and self-confidence, efficacy expectation, and positive attitude dimensions of self-efficacy among secondary-level school teachers concerning their marital status.
6. There is no significant difference in outcome expectation dimensions of self-efficacy among secondary-level school teachers concerning the marital status.
7. There is a significant difference in overall self-efficacy and self-confidence, efficacy expectation, positive attitude, and outcome expectation dimensions of self-efficacy among secondary-level school teachers concerning the locality of schools.
8. There is a significant difference in overall self-efficacy and self-confidence, efficacy expectation, and outcome expectation dimensions of self-efficacy among secondary-level school teachers concerning the board of schools.
9. There is no significant difference in the positive attitude dimension of self-efficacy among secondary-level school teachers concerning the board of schools.
10. There is a significant difference in self-confidence and positive attitude dimensions of self-efficacy among secondary-level school teachers concerning the category of schools.
11. There is no significant difference in overall self-efficacy and efficacy expectation and outcome expectation dimensions of self-efficacy among secondary-level school teachers concerning the category of schools.
12. There is a significant difference in overall self-efficacy and self-confidence, efficacy expectation, positive attitude, and outcome expectation dimensions of self-efficacy among secondary-level school teachers concerning the medium of instruction.

6.2.6. Differences in Self-Efficacy (Overall and Dimensions Wise) among Secondary-Level School Teachers Concerning the Professional Factors

1. There is a significant difference in overall self-efficacy and self-confidence, efficacy expectation, positive attitude, and outcome expectation dimensions of self-efficacy among secondary-level school teachers concerning their highest educational qualifications.
2. There is a significant difference in overall self-efficacy and efficacy expectation dimensions of self-efficacy among secondary-level school teachers concerning the stream of education.

3. There is no significant difference in self-confidence, positive attitude and outcome expectation dimensions of self-efficacy among secondary-level school teachers concerning the stream of education.
4. There is a low negative and insignificant relationship between teaching experience and overall self-efficacy and efficacy expectation and outcome expectation dimensions of self-efficacy among secondary-level school teachers.
5. There is a low positive and insignificant relationship between teaching experience, self-confidence, and positive attitude dimensions of self-efficacy among secondary-level school teachers.
6. There is a significant difference in overall self-efficacy and self-confidence, efficacy expectation, positive attitude, and outcome expectation dimensions of self-efficacy among secondary-level school teachers concerning their ICT orientation.
7. There is no significant difference in overall self-efficacy and self-confidence, efficacy expectation, positive attitude, and outcome expectation dimensions of self-efficacy among secondary-level school teachers concerning their professional course.

6.2.7. Prevalence Rate of Teacher Effectiveness among Secondary-Level School Teachers

1. Most of the secondary-level school teachers have average teacher effectiveness.

6.2.8. Variations in Teacher Effectiveness (Overall and Dimensions Wise) among Secondary-Level School Teachers Concerning the Demographic Factors

1. There is a low negative and insignificant relationship between age and overall teacher effectiveness among secondary-level school teachers.
2. There is a low positive and insignificant relationship between age and personal qualities, classroom management skills, instructional planning and implementation, and interpersonal relation (Students, Colleagues, Parents) dimensions of teacher effectiveness among secondary-level school teachers.
3. There is a low negative but significant relationship between age and professional skills, digital skills dimensions of teacher effectiveness among secondary-level school teachers.
4. There are no significant variations in overall teacher effectiveness and personal qualities, classroom management skills, instructional planning, implementation, interpersonal relations (Students, Colleagues, Parents), professional skills, and

digital skills dimensions of teacher effectiveness among secondary-level school teachers concerning their gender.

5. There is a significant variation in overall teacher effectiveness and personal qualities, interpersonal relations (Students, Colleagues, Parents), and digital skills dimensions of teacher effectiveness among secondary-level school teachers concerning their present residence.
6. There are no significant variations in classroom management skills, instructional planning and implementation, and professional skills dimensions of teacher effectiveness among secondary-level school teachers concerning their present residence.
7. There is a significant variation in overall teacher effectiveness and personal qualities, interpersonal relation (Students, Colleagues, Parents), and digital skills dimensions of teacher effectiveness among secondary-level school teachers concerning their marital status.
8. There are no significant variations in classroom management skills, professional skills, and instructional planning and implementation dimensions of teacher effectiveness among secondary-level school teachers concerning their marital status.
9. There is a significant variation in overall teacher effectiveness and personal qualities, classroom management skills, instructional planning and implementation, interpersonal relation (Students, Colleagues, Parents), professional skills, and digital skills dimensions of teacher effectiveness among secondary-level school teachers concerning the locality of schools.
10. There is a significant variation in overall teacher effectiveness and instructional planning and implementation, professional skills, and digital skills dimensions of teacher effectiveness among secondary-level school teachers concerning the board of schools.
11. There are no significant variations in personal qualities, classroom management skills, and interpersonal relation (Students, Colleagues, Parents) dimensions of teacher effectiveness among secondary-level school teachers concerning the board of schools.
12. There is a significant variation in overall teacher effectiveness and its personal qualities dimension of teacher effectiveness among secondary-level school teachers concerning the category of schools.

13. There are no significant variations in classroom management skills, instructional planning and implementation, interpersonal relations (Students, Colleagues, Parents), professional skills, and digital skills dimensions of teacher effectiveness among secondary-level school teachers concerning the category of schools.
14. There is a significant variation in overall teacher effectiveness and personal qualities, classroom management skills, instructional planning and implementation, interpersonal relation (Students, Colleagues, Parents), professional skills, and digital skills dimensions of teacher effectiveness among secondary-level school teachers concerning the medium of instruction.

6.2.9. Variations in Teacher Effectiveness (Overall and Dimensions Wise) among Secondary-Level School Teachers Concerning the Professional Factors

1. There are no significant variations in overall teacher effectiveness and classroom management skills, instructional planning and implementation, interpersonal relation (Students, Colleagues, Parents), professional skills, and digital skills dimensions of teacher effectiveness among secondary-level school teachers concerning their highest educational qualification.
2. There is a significant variation in the personal qualities dimension of teacher effectiveness among secondary-level school teachers concerning their highest educational qualification.
3. There is a significant variation in interpersonal relations (Students, Colleagues, Parents) and digital skills dimensions of teacher effectiveness among secondary-level school teachers concerning the stream of education.
4. There are no significant variations in overall teacher effectiveness and personal qualities, classroom management skills, instructional planning and implementation, and professional skills dimensions of teacher effectiveness among secondary-level school teachers concerning the stream of education.
5. There are low negative and insignificant relationship between teaching experience and overall teacher effectiveness and instructional planning and implementation, interpersonal relation (Students, Colleagues, Parents) and professional skills dimensions of teacher effectiveness among secondary-level school teachers.
6. There are low positive and insignificant relationship between teaching experience, personal qualities, and classroom management skill dimensions of teacher effectiveness among secondary-level school teachers.

7. There is a low negative but significant relationship between teaching experience and digital skills dimension of teacher effectiveness among secondary-level school teachers.
8. There is a significant variation in overall teacher effectiveness and its personal qualities, classroom management skills, instructional planning and implementation, interpersonal relations (Students, Colleagues, Parents), professional skills, and digital skills dimensions of teacher effectiveness among secondary-level school teachers concerning their ICT orientation.
9. There are no significant variations in overall teacher effectiveness and personal qualities, classroom management skills, instructional planning and implementation, interpersonal relations (Students, Colleagues, Parents), professional skills, and digital skills dimensions of teacher effectiveness among secondary-level school teachers concerning their professional course.

6.2.10. Relationship between Workload, Self-Efficacy, and Teacher Effectiveness

1. There is a low negative and insignificant relationship between workload and self-efficacy among secondary-level school teachers.
2. There is a low negative and insignificant relationship between workload and teacher effectiveness among secondary-level school teachers.
3. There is a low positive and significant relationship between self-efficacy and teacher effectiveness among secondary-level school teachers.

6.2.11. Direct, Indirect, and Total Effect of Workload and Self-Efficacy on Teacher Effectiveness among Secondary-Level School Teachers

1. Workload has no significant effect on self-efficacy among secondary school teachers.
2. Self-efficacy significantly affects teacher effectiveness among secondary-level school teachers.
3. Workload has no significant effect on teacher effectiveness among secondary-level school teachers.
4. In the presence of self-efficacy, workload directly influences teacher effectiveness among secondary-level school teachers.
5. The total effect of workload on teacher effectiveness was insignificant.
6. Workload has no indirect effect on teacher effectiveness, which was found to be insignificant.

7. Secondary-level school teacher's self-efficacy does not significantly mediate the relationship between workload and teacher effectiveness.

6.3.0. Discussion of the Major Findings

This section is the most crucial part of the study. In this section, the major findings that emerged from the analysis and interpretations are compared with the existing theories and previous research findings, and the conclusions are drawn, as in the preceding paragraphs.

Workload

While the prevalence rate of workload was the concern, the result revealed that most secondary-level school teachers have average workload. This finding was supported by Saudi and Rahman (1998) and Romine (1958). On the other hand, Estrada-Araoz et al. (2023) and Gull and Akhtar (2014) reported that teachers perceived a high workload. This study indicated that an average workload naturally implies that teachers have a reasonable number of teaching hours, administrative duties, and preparation time, which can be conducive to maintaining sustainable work.

The present study revealed a low positive but significant relationship between workload and age among secondary-level school teachers. This finding was corroborated by Maruyama et al. (2009) and Gull and Akhtar (2014). On the other hand, no such study was found which could contradict this finding.

The study found a significant variation in workload among secondary-level school teachers concerning their gender. Gull and Akhtar (2014) corroborated this finding. Female teachers habitually experience a higher workload due to the dual burden of professional responsibilities and domestic responsibilities formed by traditional gender roles. In contrast, male teachers face fewer domestic limitations, allowing them to focus more on professional tasks.

Again, the study found no significant variation in workload among secondary-level school teachers concerning their present residence. This finding is remarkable as it imitates a positive consistency in workload distribution among secondary-level school teachers across urban, semi-urban, and rural settings in West Bengal.

Also, the study showed a significant variation in workload among secondary-level school teachers concerning their marital status. Married teachers, particularly those with children, often experience a higher degree of workload both at school and at home. Conversely, unmarried teachers, particularly those without dependents, may face fewer domestic

responsibilities, enabling them to allocate more time and energy toward their professional duties.

The present study's findings revealed no significant variation in workload among secondary-level school teachers concerning their highest educational qualifications. No study supported this finding. On the contrary, Gull and Akhtar (2014) reported a significant difference among secondary school teachers concerning their qualifications. Whether they hold a graduate degree, postgraduate degree, or higher qualification, teachers experience similar workload levels in their professional responsibilities.

This study also found a significant variation in workload among secondary-level school teachers concerning the stream of education. No study stayed this finding. This finding was contrasted by Gull and Akhtar (2014), who reported no significant difference among secondary school teachers concerning their subjects (arts and science). Teachers from different streams, such as science, humanities, and commerce, may experience varying degrees of workload.

The present study showed a positive but insignificant relationship between teaching experience and workload of secondary-level school teachers. No study corroborated this finding. This finding was contrasted by Gull and Akhtar (2014) reported a significant difference among secondary school teachers concerning their teaching experience. More experienced teachers are inclined to describe higher levels of workload.

The study findings revealed no significant variation in workload among secondary-level school teachers concerning their ICT orientation. Information and Communication Technology (ICT) did not look to affect their overall workload noticeably.

Further, results revealed no significant variation in workload among secondary-level school teachers concerning their professional courses. Professional courses did not significantly affect teachers' overall workload.

Self-efficacy

While the prevalence rate of self-efficacy was the concern, the result revealed that most secondary-level school teachers have average self-efficacy. This finding was supported by Mogias et al. (2021), Seema and Sobha (2017), and Srisopha and Saengsri (2015). Conversely, Ahmad et al. (2023), Fenyvesiova and Kollarova (2013), Woo et al. (2018), and Fenyvesiova and Kollarova (2013) found high self-efficacy among teachers of secondary education. Also, Olayiwola (2011) reported that teachers were rated with low self-efficacy. This finding indicates that while teachers possess reasonable confidence in their abilities, there is an area for improvement.

The study revealed a low negative and insignificant correlation between age and self-efficacy among secondary-level school teachers. This finding was corroborated by Misirli and Oztuzcu (2023), Mbongo (2024), Gonzaga (2024) and Salami (2007). On the contrary, Selinger and Grostenberger (2024) indicated that age significantly affects self-efficacy. This finding suggests that age should not be considered a primary factor in evaluating or predicting teacher self-efficacy.

Again, the study showed no significant difference in self-efficacy among secondary-level school teachers concerning their gender. This finding was supported by Shukla (2024), Odanga et al. (2015), Mellyzar et al. (2022), Habib (2019), and Salami (2007). On the other hand, Ezer and Ulukaya (2018) and Saloviita and Almulla (2024) reported a significant difference in self-efficacy levels concerning gender among secondary-level school teachers. This finding indicates that male and female teachers, regardless of gender, report similar levels of self-efficacy in their professional roles.

Also, the study revealed a significant difference in self-efficacy among secondary-level school teachers concerning their marital status. No study was found to support these findings. On the contrary, Mbongo (2024) and Kashif (2021) found no significant association between teachers' self-efficacy and marital status among teachers in rural high schools. This finding indicated that marital status may play a role in shaping teachers' self-efficacy in their abilities.

The present study found a significant difference in self-efficacy among secondary-level school teachers concerning their school locality. This finding aligns with Srisopha and Saengsri (2015) and Shazadi et al. (2011). No such study was found which could contradict this finding. This finding indicated that the geographical setting of a school—whether urban or rural—may impact teachers' self-efficacy.

The study's finding revealed a significant difference in self-efficacy among secondary-level school teachers concerning the board of schools. This result was corroborated by Kaur and Kaur (2022). No such study was found which could contradict this finding. The study underscores that the school board type can influence teacher self-efficacy.

Other results revealed no significant difference in self-efficacy among secondary-level school teachers concerning their school category. This result was substantiated by Bala and Bakshi (2017). On the contrary, Odanga and Aloka (2022) revealed a significant influence of school category on teachers' self-efficacy.

Also, the current study showed a significant difference in self-efficacy among secondary-level school teachers concerning their highest educational qualifications. This result was supported by Shazadi et al. (2011). On the other hand, Kumar (2017) showed no significant

difference among teachers concerning their educational qualification. This finding suggested that teachers with higher academic qualifications tend to report higher levels of self-efficacy.

The result of this study revealed a low negative and insignificant association between teaching experience and self-efficacy among secondary-level school teachers. This finding aligns with Abidin et al. (2019). On the contrary, Mishal (2024) indicated a strong positive correlation between overall self-efficacy and teaching experience. Also, Odanga et al. (2022) showed that the effects of experience on teachers' self-efficacy were significant. This finding indicated that the number of years a teacher has spent in the profession does not strongly or directly influence their self-efficacy.

Furthermore, this study's result revealed a significant difference in self-efficacy among secondary-level school teachers concerning their ICT orientation. This finding was supported by Singh and Singh (2023) and Kumar and Sharma (2024). No such study was found which could contradict this finding. The study indicated that teachers more oriented toward ICT will likely feel more competent in integrating technology into their classrooms, which could positively impact their teaching methods and student interactions.

Teacher Effectiveness

The present study revealed that most secondary-level school teachers have average teacher effectiveness. This finding was supported by Naik (2024), Suvarna and Varun (2023), Kumar (2019), and Chowdhury (2014). On the contrary, these findings were contrasted by the studies of Suvarna and Varun (2023), which reported that secondary school science teachers showed high teacher effectiveness. Bruno et al. (2013) found that the teaching effectiveness of secondary school teachers in the Emohua local government area was below average. This finding indicated that teacher effectiveness is pivotal for student learning and holistic development, yet its moderate prevalence highlights potential constraints in the teaching environment.

The present study findings revealed low negative and insignificant association between age and overall teacher effectiveness among secondary-level school teachers. This finding aligns with Chowdhury (2014) and Bruno et al. (2013). On the contrary, Dien et al. (2022) indicated that teachers' age significantly influences teaching effectiveness.

The study also revealed low negative but significant relationship between age and professional skills, digital skills dimensions of teacher effectiveness among secondary-level school teachers. This finding was corroborated by Radhamani and Kalaivani (2023) and Estrada-Araoz et al. (2023). No such study was found which could contradict this

finding. The result indicated that age may not substantially influence teacher effectiveness as an isolated demographic variable.

The present study revealed no significant variations in overall teacher effectiveness among secondary-level school teachers concerning their gender. This finding was supported by Sehjal (2021), Toor (2021), Biswas (2017), Pachaiyappan and Raj (2014), Chowdhury (2014), Ritu and Singh (2012), Ozgenel an Mert (2019), Ritu and Singh (2012), Yavuz and Guzel (2020), Kumar and Kumar (2015) and Islahi and Nasreen (2013). On the contrary, Sagar and Parveen (2017) and Venkatesh (2015) indicated that significant difference in teaching effectiveness between male and female teachers. Diwa (2023) also indicated that gender significantly influences teaching effectiveness in mathematics. This result underscores that individual professional attributes more influence teacher effectiveness than gender. The study indicated no significant variations in overall teacher effectiveness among secondary-level school teachers regarding their residence. Chaliha (2013) and Pachaiyappan and Raj (2014) corroborated this finding. However, such study was found that could contradict this finding.

The result reported a significant variation in overall teacher effectiveness among secondary-level school teachers concerning their marital status. This finding aligns with Slater et al. (2012) and Raju and Vardhini (2022). On the other hand, Tyagi (2013). Kumar and Kumar (2015) reported no significant difference in teaching effectiveness based on marital status. This finding indicated that married teachers might experience different stressors or support systems than their unmarried counterparts, potentially impacting their teacher effectiveness.

The study revealed no significant variations in overall teacher effectiveness among secondary-level school teachers concerning their school locality. This finding was supported by Saka and Onanuga (2019), Sehgal (2021), Pachaiyappan and Raj (2014), and Singh (2012). Kumar and Kumar (2015). On the other hand, Biswas (2017) and Dash (2016) indicated a significant difference in teacher effectiveness concerning locality among secondary school teachers. The result indicated that locality may not be a primary determinant of teacher effectiveness in the context of secondary-level education in West Bengal. The study showed no significant variations in overall teacher effectiveness among secondary-level school teachers regarding the board of schools. Sagar and Parveen (2017) corroborated this finding.

However, the result also revealed a significant variation in overall teacher effectiveness among secondary-level school teachers concerning their school category. Sehjal (2021) corroborated this finding. On the contrary, Kumar and Kumar (2015) reported that the

school category does not significantly affect it. This finding emphasises the essential for targeted involvements to address teachers' exact challenges in different school categories, thereby improving teacher effectiveness.

The current study demonstrated no significant variations in overall teacher effectiveness among secondary-level school teachers concerning their highest educational qualification. This finding aligns with the findings of Tyagi (2013). On the contrary, Slater et al. (2012) and Anitha and Raju (2023) indicate significant variations in overall teacher effectiveness beyond just educational qualifications. The results showed that effective teaching is more influenced by practical experience, workload management, and the teacher's ability to adapt to student needs rather than academic qualifications alone.

Results revealed no significant variations in overall teacher effectiveness among secondary-level school teachers concerning the stream of education. No study was found to support this. On the other hand, Biswa (2017) indicated variations in overall teacher effectiveness based on the stream of education. This finding suggested that teacher effectiveness may not be strongly influenced by the subject area taught at the secondary level.

The present study revealed negative and insignificant relationship between teaching experience and overall teacher effectiveness among secondary-level school teachers. This finding was corroborated by Podolsky et al. (2019) and Chowdhury (2014). On the contrary, Dien et al. (2022), Pachaiyappan and Raj (2014), and Onyekuru and Ibegbunam (2013), who reported that teacher experience significantly influences teacher effectiveness among secondary school teachers. This finding indicated that teaching experience may not directly influence teacher effectiveness at the secondary level.

Also, the study showed no significant variations in overall teacher effectiveness among secondary-level school teachers concerning their professional courses. No study was found to support and contrary. This result indicated that the type of professional training or courses teachers undertake may not directly influence their perceived effectiveness in the classroom.

Relationship between Workload, Self-Efficacy and Teacher Effectiveness

The present study measured the relationship between workload and self-efficacy among secondary-level school teachers, and the results showed a low negative and insignificant relationship between workload and self-efficacy among secondary-level school teachers. Pantao (2024) supported this finding. In contrast, Tschannen-Moran & Hoy (2001) found that perceived workload leads to burnout, negatively impacting teacher efficacy.

The study revealed a low negative and insignificant relationship between workload and teacher effectiveness among secondary-level school teachers. This result was supported by Klassen and Chiu (2010) and Hargreaves (2000), who reported how excessive workload can lead to burnout, stress, and a decline in teachers' ability to perform effectively in the classroom. On the other hand, Nuwaha et al. (2023) reported a weak but significant positive correlation between teachers' workload and their effectiveness in secondary schools.

The present study also revealed a low positive and significant relationship between self-efficacy and teacher effectiveness among secondary-level school teachers. This finding was corroborated by Meiyanti et al. (2022), Jaafar et al. (2019) and Sehgal et al. (2016). However, no study was found that could contradict this finding.

Direct, Indirect, and Total Effect of Workload and Self-Efficacy on Teacher Effectiveness among Secondary-Level School Teachers

Finding of this study revealed that workload does not significantly affect teacher effectiveness among secondary-level school teachers. This result was supported by Nuwaha et al. (2023) showed a weak positive correlation between teachers' workload and their effectiveness. On the contrary, Amalu (2018) found that workload stress does not significantly influence key effectiveness dimensions such as lesson presentation and classroom management.

Results of this study also revealed that self-efficacy significantly affects teacher effectiveness among secondary-level school teachers. This finding was corroborated by Akhter et al. (2022) and Garg (2024), who reported that self-efficacy is a crucial factor influencing teacher effectiveness. Sehgal (2017) also reported a positive association between teacher self-efficacy and different dimensions of teacher effectiveness.

Again, the present study found that in the presence of self-efficacy, workload directly influences teacher effectiveness among secondary-level school teachers. This result was stayed by Zeb et al. (2024) reported that high self-efficacy is positively correlated with effective classroom management and teaching practices. Also, Garg (2024) reported that teachers with strong self-efficacy are more committed and motivated, leading to improved student outcomes.

The current study revealed that the total effect of workload on teacher effectiveness was insignificant. Amalu (2018) showed that stress from workload did not significantly influence various dimensions of professional effectiveness. However, this finding is contradicted by Nuwaha et al. (2023) who stated a weak but significant positive correlation

between workload and teacher effectiveness. Teaching methods and student communications may be more critical in perceived effectiveness than workload alone.

The study found that secondary-level school teacher's self-efficacy does not significantly mediate the relationship between workload and teacher effectiveness. Istiqomah et al. (2024) supported this result, which revealed that Self-efficacy does not mediate the influence of work commitment and Total Quality Management. On the contrary, Feng (2023) found that Teachers' Intrinsic Orientation for Profession positively predicted self-efficacy, mediating effective. Yu et al. (2015) found that Self-efficacy partially mediates the relationship between work stress and job burnout. Therefore, further investigation is suggested to explore the exact scenario.

6.4.0. Educational Implications of the Study

The present study has significant implications in education and other related fields.

1. This study will help the secondary-level school teachers to know their level of workload, SE and TE.
2. This study will help the school education authorities maintain a proper guideline for equal workload distribution among secondary-level school teachers.
3. The study revealed some influential demographic and professional factors of SE among secondary-level school teachers. Therefore, secondary-level school teachers can enhance their SE by identifying and manipulating those influential factors. Further, this enhanced SE will increase their teacher effectiveness.
4. This study will help in school policy-making, professional development programs, and teacher training initiatives, improving teacher effectiveness and educational outcomes for students in secondary-level schools.
5. This study can help improve teacher preparation and development programs, fostering a more well-rounded approach to teacher effectiveness that considers both personal qualities and professional skills in the classroom.
6. The study will help school teachers develop time management and organisational skills to manage their workload while maintaining teaching quality.

6.5.0. Limitations of the Study

The researcher thoroughly examined every subject in this study to maintain a high quality. The major limitations of the study lie in the following:

1. A significant limitation of this study lies in the coverage of districts and boards and the small number of participants, which limits the scope of generalizability of the findings.
2. Another limitation of this study is that the sample distribution is unequal among the elected districts.
3. There were fluctuations in the number of participants in the demographic and professional factors, which were not in the researcher's control. These fluctuations may cause variations in the results.
4. At the time of data collection, the researcher felt that the English version of the self-efficacy and teacher effectiveness scales were challenging to understand for some Bengali-medium school teachers, which could influence their response.

6.6.0. Suggestions for Further Study

Several areas warrant attention to build on this research's findings and improve the robustness of future studies.

1. Future studies should consider using locally adapted versions of the research tools, translated into Bengali or other regional languages, to ensure that all participants can fully understand and engage with the survey.
2. Future studies could include qualitative methods, such as interviews or focus groups, to better understand teachers' personal experiences and challenges in their professional lives.
3. Future studies should aim to include a more extensive and diverse sample from a broader range of districts and educational boards to enhance the generalizability of the findings. A more representative sample would provide a clearer picture of teacher workload, self-efficacy, and effectiveness across different contexts.
4. Future research should ensure a more balanced distribution of participants across districts to avoid sampling bias and obtain more equitable data. This would help make more accurate comparisons and inferences about the influence of different regional contexts on teacher workload and effectiveness.

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APPENDICES

Appendix-A

Consent Form

Workload, Self-Efficacy and Teacher Effectiveness among Secondary Level School Teachers

Investigator's Name: Prahlad Kirtania, Ph.D., Scholar, Dept. of Education, Jadavpur University

Phone: 9749999103/7044099132 Email Id: prahladeduphd@gmail.com

Supervised by

Dr. Lalit Lalitav Mohakud
Associate Professor
Dept. of Education
Jadavpur University, Kolkata

Prof. Muktipada Sinha
Professor
Dept. of Education
Jadavpur University, Kolkata

Dear Sir/Madam,

My name is Prahlad Kirtania, and I am pursuing my PhD in the Department of Education at Jadavpur University, Kolkata, West Bengal, India. The tentative title of my research is "Workload, Self-Efficacy and Teacher Effectiveness among Secondary Level School Teachers". The primary objective of my study is to examine the correlation between Teacher Effectiveness and Self-Efficacy among school teachers in West Bengal. It will also focus on comparing these two variables with regard to selected demographic and background factors.

This research is a survey aimed at school teachers in West Bengal as its target participants (population). Data collection methods include offline surveys. In these surveys, a questionnaire is utilized, employing three types of instruments to gather information as described below:

1. Demographic and Professional Information Sheet.
2. 'Teacher Effectiveness scale' of Anju Gandhi (consists of 48 items).
3. 'Self-Efficacy Scale' of A.K. Singh and Sruti Narayin (consists of 20 items).

I am conducting a survey and kindly request your voluntary participation. Please review the questionnaire's instructions and respond to each item in the respective section. Your input is crucial for the analysis, taking approximately 15-20 minutes. Your responses will be confidential, using a number coding system for anonymity. The data will only be

accessible to the researcher and their supervisor. Feel free to inquire about the study, and updates will be available. Participation is voluntary, and you can withdraw anytime. The data will be used for the researcher's PhD thesis, remaining accessible until study completion. Your identity will not be disclosed, and the data may be shared with educational experts. Your consent is appreciated and can be revoked at any time without affecting your relationship with the investigator. Contact Prahlad Kirtania for details.

I confirm that I have thoroughly read and comprehended the information within this Consent Letter and willingly consent to participate in this research.

Signature

Appendix-B

Demographic and Professional Information Sheet

1) Name:

2) Age (in years):

3) Gender: Male / Female / Others

4) Present Residence: Rural / Semi-Urban / Urban

5) Marital Status: Married / Unmarried / Others (If yes, please mention)

6) Highest Educational Qualification:

7) Stream of Education: Arts / Science /Commerce

8) Subject:

9) Number of Subjects Teaching:

10) Teaching Experience (in Years):

11) Class load (No of classes per week):

12) ICT orientation: Yes / No (If yes, please mention)

13) Any other professional course other than D.El.Ed / B.Ed / M.Ed: Yes / No (If yes, please mention)

14) Additional responsibility other than duty in school (Like Administrative): Yes / No

(If yes, please mention)

15) Name of School:

16) District Name of School:

17) Locality of School: Rural / Semi-Urban / Urban

18) School Board or Council:

19) School Category: Boys / Girls / Co-ed School

20) Medium of Instruction: Bengali /English

21) Type of School: Public (i.e., Govt. / Govt. sponsor / Govt. aided) / Private

Appendix-C

Teacher Effectiveness Scale developed by Anju Gandhi (2020)

This scale is related to Teacher Effectiveness. The purpose of this scale is to measure teacher effectiveness under six dimensions: Personal Qualities (items 1-8), Classroom Management Skills (items 9-15), Instructional Planning and Implementation (items 16-25), Interpersonal Relations (Students, Colleagues, and Parents) (items 26-33), Professional Skills (items 34-41), and Digital Skills (items 42-48). Please read each statement carefully and select the response option that you find most appropriate and proper in your case. Please (√) tick against your response. The response options include "Strongly Agree (SA)," "Agree (A)," "Undecided (U)," "Disagree (DA)," and "Strongly Disagree (SDA)." Your cooperation is vital for the successful completion of this research.

Teacher Effectiveness scale

Personal Qualities	**SA**	**A**	**U**	**DA**	**SDA**
1. I have an understanding of other's feelings.					
2. I exhibit a sense of humour.					
3. I have a supportive behaviour.					
4. I am compassionate.					
5. I can confront changes and challenges courageously.					
6. I accomplishes task creatively.					
7. I am emotionally intelligent.					
8. I am sensitive to other's culture/ way of life.					
Classroom Management Skill	**SA**	**A**	**U**	**DA**	**SDA**
9. I preserve discipline in class without harshness.					
10. I handle classroom events successfully to assist smooth transitions.					
11. I make best use of the material resources in the classroom.					
12. I don't display student rank in classroom.					
13. I praise students for their performance in front of the class.					
14. I encourage interactions in classroom.					
15. I display the list and consequences of positive Behaviour.					
Instructional Planning and Implementation	**SA**	**A**	**U**	**DA**	**SDA**

16. I prepare lesson plans with clearly stated learning outcomes based behavioural objectives.					
17. I prepare lesson plans that include the activities for engaging students.					
18. I relate my classroom instructions with real life situations.					
19. I take care of learning styles of every student while designing lesson plans.					
20. I ask questions to stimulate higher order thinking skills of students.					
21. I use innovative methods of teaching keeping in view diverse cultural background of students.					
22. I encourage students for participating in classroom.					
23. I use various activities to increase student interest and improving student' achievement.					
24. I give immediate feedback to the student about their assignments.					
25. I relate homework to the content taught in class					
Interpersonal Relations (Students, Colleagues, Parents)	**SA**	**A**	**U**	**DA**	**SDA**
26. I sustain professional collegial relations to improve teaching competence.					
27. I feel pleasure in working collectively with colleagues.					
28. I show interest to know more about student.					
29. I take interest in parent teacher association.					
30. I assist my students for their personal and educational problems.					
31. I always welcome innovative ideas and suggestions given by students and my colleagues.					
32. I don't hesitate to share my ideas with my colleagues.					
33. I don't hesitate to share ideas with parents and ask help for students' harmonious development.					
Professional skills	**SA**	**A**	**U**	**DA**	**SDA**
34. I don't violate school and government policies.					
35. I retain professional manner.					
36. Have command on my own subject.					
37. I report to work on time.					
38. I serve as positive role model to students.					
39. I engage myself in a culture of professional inquiry.					
40. I contribute to schemes and policies intended to improve the professional community.					

41. I like to be a part of professional development opportunities like conferences, seminars and Workshops etc.					
Digital Skills	**SA**	**A**	**U**	**DA**	**SDA**
42. I update myself with essential new technologies					
43. I think critically about technology before using it in my classroom.					
44. I use online educational resources in classroom.					
45. I choose various technologies that are suitable to different teaching theories and model.					
46. I use technology effectively for teaching and Learning.					
47. I motivate my students and colleagues for using educational channels use SWAYAM PARABHA etc.					
48. I can employ technology while execute assessment in classroom.					

Appendix-D

Self-Efficacy Scale Developed by Dr. Arun Kumar Singh & Dr. Shruti Narain (2014)

This scale follows a five-point Likert-type format and comprises 20 items organized into four dimensions: Self-Confidence (items 1 to 5), Efficacy Expectation (items 6 to 10), Positive Attitude (items 11 to 15), and Outcome Expectation (items 16 to 20). The scale consists mainly of positive statements, but there are four negative items (items 4, 10, 12, and 18). Respondents choose from five response options: "Strongly Agree (SA)," "Agree (A)," "Undecided (U)," "Disagree (DA)," and "Strongly Disagree (SDA)." Please (√) tick against your response.

Self-Efficacy Scale

Self-Efficacy	**SA**	**A**	**U**	**DA**	**SDA**
1. I feel confident about my capabilities that with little efforts I can resolve difficult problems.					
2. I am confident that I can achieve all targets that I set for myself.					
3. I am so confident of my capabilities that I can finish tasks on time.					
4. Despite hard work, I feel I will not succeed.					
5. I feel I can keep self-control even at difficult times.					
6. In any circumstance, I can achieve what I desire.					
7. I have enough self-confidence to finish any work.					
8. With my efforts, I can achieve anything.					
9. My own potential and capabilities are responsible for all my achievements so far.					
10. It is usually not possible for me to achieve any targets.					
11. I am able to balance myself even in most difficult times.					
12. I am unable to face difficulties without any help and support.					
13. Even in most difficult situations, I can strategize to resolve and deal with it.					
14. I try to level best to achieve my targets.					
15. I can keep my cool even when others try to take up fight with me.					
16. If I get stuck in some work, with little efforts I can resolve it.					
17. If I try sincerely, I am confident I shall be able to succeed.					
18. Despite concentrating on my any aim, I will fail.					
19. If I am determined to succeed, I shall be able to achieve success.					
20. If work as per plan, I shall be able to reap result quickly.					

Appendix-E

Paper Presentation Certificate-1

GECE 2020

THE 1ST GLOBAL E-CONFERENCE ON EDUCATION-2020 | KOLKATA

Theme: "Human Cognition in Learning: An Educational Perspective"

CERTIFICATE OF PARTICIPATION

PRAHLAD KIRTANIA

Ph.D. Scholar of Jadavpur University, Kolkata, has participated and presented a paper entitled "**Impact of Workload on Self-Efficacy among School Teachers: A Study of Demographic and Professional Factors**" in the 1st Global E-Conference on Education-2020, Kolkata, India, on the theme "Human Cognition in Learning: An Educational Perspective", organized by the Department of Education, Jadavpur University, Kolkata, India and the Department of Education, Dinabandhu Mahavidyalaya, Bongaon, North 24 Parganas, West Bengal, India on August 22-23, 2020.

DR. MUKTIPADA SINHA
Head, Department of Education
Jadavpur University

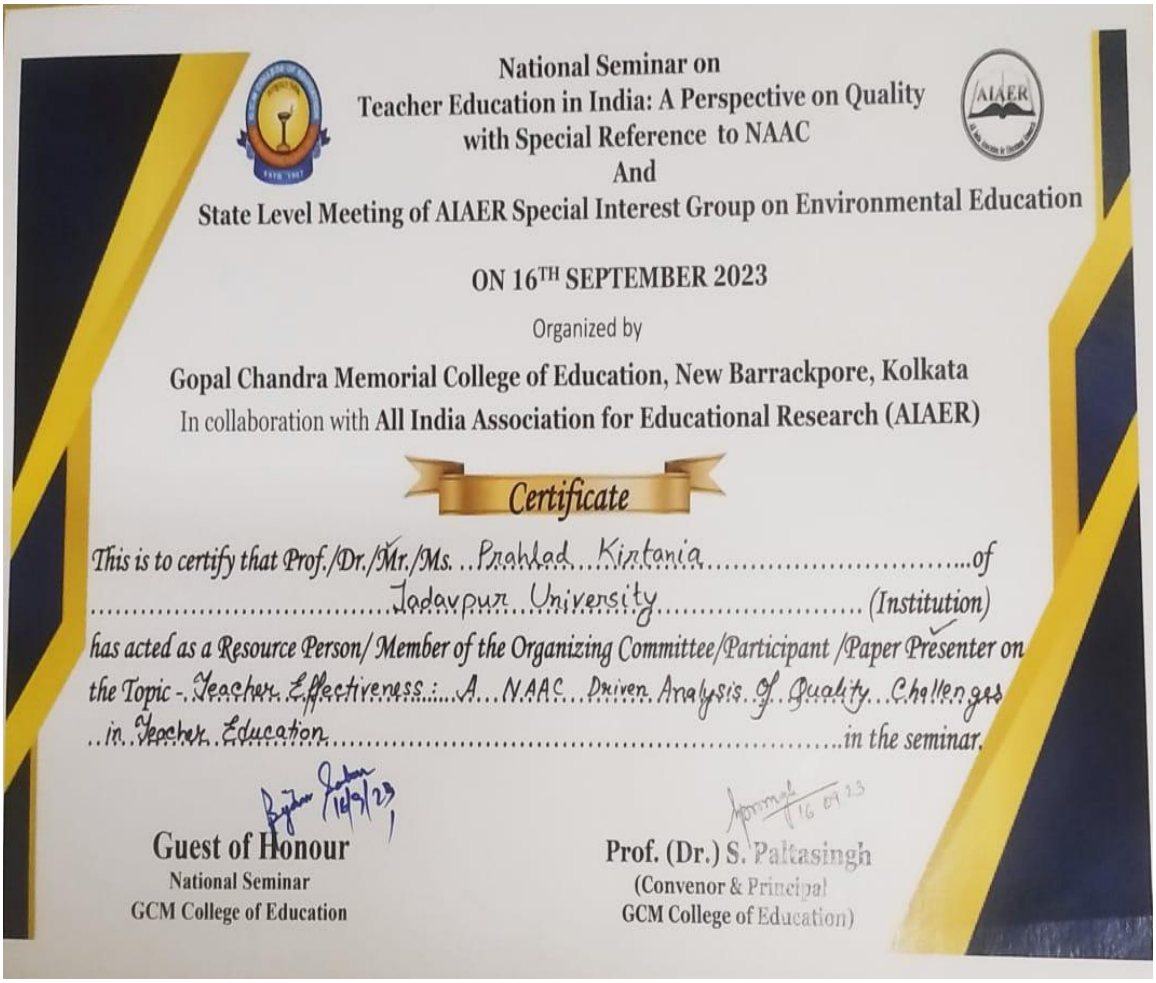
DR. LALIT LALITAV MOHAKUD
CONVENER, GECE-2020
KOLKATA

SMT. BISWAJITA MOHANTY
CONVENER, GECE-2020
KOLKATA

DR. BISWAJIT GHOSH
Principal, Dinabandhu
Mahavidyalaya

Appendix-F

Paper Presentation Certificate-2



National Seminar on
Teacher Education in India: A Perspective on Quality
with Special Reference to NAAC
And
State Level Meeting of AIAER Special Interest Group on Environmental Education

ON 16TH SEPTEMBER 2023

Organized by

Gopal Chandra Memorial College of Education, New Barrackpore, Kolkata
In collaboration with All India Association for Educational Research (AIAER)

Certificate

This is to certify that Prof./Dr./Mr./Ms. Prahlad Kintania ..... of
..... Jadavpur University ..... (Institution)
has acted as a Resource Person/ Member of the Organizing Committee/Participant /Paper Presenter on
the Topic - Teacher Effectiveness : A NAAC Driven Analysis of Quality Challenges
in Teacher Education ..... in the seminar.

Guest of Honour
National Seminar
GCM College of Education

Prof. (Dr.) S. Paltasingh
(Convenor & Principal
GCM College of Education)

Appendix-G

Copy of the Published Paper

The Academic
International Journal of Multidisciplinary Research

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Teacher Effectiveness: Challenges and Opportunities in Teacher Education Institutions

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ARTICLE DETAILS

Research Paper

Keywords: *Teacher Effectiveness, NAAC, NEP 2020, Challenges, Opportunities, Teacher Education, Educational Quality*

ABSTRACT

Teacher education plays a significant part in the formation of the future of a nation by making knowledgeable and effective teachers. The National Accreditation Council (NAAC) for teacher education programs plays a vital part in confirming value and excellence in the field. NAAC accreditation processes provide valuable insights into the challenges faced by teacher education institutions striving to meet NAAC's rigorous quality benchmarks. This paper determines the challenges and opportunities encountered by Teacher Education Institutes (TEIs) in enhancing teacher effectiveness in agreement with the National Education Policy (NEP) 2020. We explore initiatives for faculty development and training aimed at meeting NAAC standards. We also explore opportunities and challenges encountered by TETs in addressing these challenges. Through directing on faculty qualifications, pedagogical practices, infrastructure development, and technology integration, institutions can underwrite significantly to the upgrading of teacher effectiveness and, finally, the quality of education in India.

Introduction:

Teacher education is crucial for shaping a nation's future through the training of capable and efficient educators. In India, the National Assessment and Accreditation Council (NAAC) holds significant responsibility in evaluating and accrediting higher education institutions. Although NAAC evaluates various aspects of education quality, this document focuses on the effectiveness of teachers in the context of NAAC accreditation. According to Aggarwal and Aggarwal (2017), NAAC accreditation is a quality indicator for Indian higher education institutions, indicating compliance with regulations and continuous improvement. NAAC's accreditation procedure delivers a complete outline for evaluating the quality and effectiveness of teacher training programs, thus helping continuous development and upgrading of educational standards (Kumar and Khan, 2019). The National Assessment and Accreditation Council (NAAC) has occurred as an essential object in evaluating and enhancing educational quality across several institutions.

Teacher Effectiveness:

Teacher effectiveness is a multi-dimensional idea, including not only pedagogical skills, but also characteristics such as classroom management, interpersonal relationships and adaptability. The term "teacher effectiveness" is broadly used and refers to the measurement of teachers' success in carrying out institutional and other specified tasks required by their position. Teacher effectiveness means teacher excellence or the highest level of efficiency and productivity (Bhullar, 2019). Good (1959) defined teacher effectiveness as "the ability to interact with students' physical, intellectual and psychological interests, content, efficiency of teachers, and social needs". Hunt (2009) defined the effectiveness of teachers as follows: "The collection of characteristics, skills, behaviours and actions of teachers at all levels of education that enable students to achieve optimal outcomes. Effective teachers contribute significantly to the achievements of students and overall educational quality (Stronge 2007; Ingersoll 2003).

Importance of Teacher Effectiveness:

The position of teacher effectiveness cannot be exaggerated. Numerous studies have highlighted the significant impact that effective teachers have on student outcomes. Hattie (2009) found that teacher effectiveness is one of the maximum significant aspects manipulating student achievement, exceptional even student background and socioeconomic status. Similarly, research by Darling-Hammond (2000) emphasized the crucial role that teachers play in promoting student learning and development. Effective

teachers possess a wide variety of skills and qualities that qualify them to meet the miscellaneous requirements of their students. They demonstrate mastery of their subject matter, employ effective instructional methods, and cultivate a supportive and engaging classroom atmosphere (Marzano et al., 2003). Furthermore, effective teachers excel in building positive relationships with their students, offering encouragement and support while maintaining high academic standards (Brophy, 2004). Moreover, effective teachers are dedicated to enhancing their skills through continuous professional development and self-reflection (Guskey, 2000). They prioritize addressing the unique requirements of every student and adjusting their teaching methods accordingly (Tomlinson, 1999). This approach not only fosters academic progress but also cultivates critical thinking, problem-solving capabilities, and a lasting enthusiasm for learning in students. Teacher effectiveness plays a crucial role in fostering both academic achievement and overall development. Equipped with essential skills, knowledge, and attributes, effective teachers inspire, encourage, and empower their students to reach their maximum capabilities.

NAAC and Accreditation:

The National Assessment and Accreditation Council (NAAC) plays a crucial role in ensuring the quality of higher education institutions in India. Established in 1994 by the University Grants Commission (UGC), NAAC operates as an autonomous body tasked with evaluating and accrediting institutions based on stringent criteria. NAAC assesses institutions on various parameters, including infrastructure, teaching and learning processes, faculty qualifications, and research output. Its accreditation process involves a thorough evaluation of these aspects, aiming to promote excellence in higher education and institutional development.

Accreditation by NAAC is highly respected and often considered a benchmark for institutional quality in India. Institutions that receive NAAC accreditation demonstrate their commitment to maintaining high standards of education and infrastructure, which can enhance their reputation and attract students and faculty.

NAAC Accreditation Criteria and Teacher Education:

NAAC accreditation is vital for maintaining quality and excellence in teacher education programs. These certification morals are intended to address the exclusive needs and challenges of teacher education institutions, casing features like curriculum design, teaching methods, faculty qualifications, student outcomes, and the general learning situation. These criteria set benchmarks for institutions, encouraging continuous improvement and innovation in their programs. Rao (2016) notes that NAAC

accreditation assesses how effectively teacher education programs prepare future educators for the profession's demands. The rigorous evaluation process promotes the adoption of best practices and enhances program quality. By achieving accreditation, institutions show their dedication to academic excellence and accountability, building confidence among stakeholders and ensuring graduates are well-equipped to contribute to the education sector.

Objectives of the Study:

The primary objectives of this paper

1. To provide an in-depth analysis of teacher effectiveness through the lens of NAAC standards and criteria.
2. To explore how NAAC's assessment and accreditation processes impact the quality of teacher education.
3. To identify and analyze the challenges faced by teacher education institutions striving to meet NAAC's rigorous quality benchmarks.
4. To examine strategies employed by institutions to enhance teacher effectiveness and achieve higher NAAC ratings.
5. To investigate the challenges and opportunities that Teacher Education Institutes (TEIs) face in improving teacher effectiveness as per the National Education Policy (NEP) 2020.

Teacher effectiveness and NAAC Standards:

Alignment of Curricula with NAAC Criteria:

One of the fundamental aspects of NAAC accreditation is the alignment of curricula with prescribed criteria. In the context of teacher education, this needs institutions to confirm that their teacher training programs reproduce the growing wants of the education sector. Achieving this alignment involves continuous curriculum review and adaptation, keeping in mind factors such as changing pedagogical approaches, technological advancements, and societal demands.

Faculty Qualification and Pedagogical Approaches:

NAAC prioritizes the qualifications and competencies of faculty members. The effectiveness of educators is strongly associated with the expertise and teaching skills of their trainers. Thus, institutions must employ and retain highly qualified faculty who are both experts in their subjects and skilled in contemporary teaching methods. Pedagogical approaches are also under scrutiny. NAAC encourages institutions to employ learner-centric and innovative teaching methods that engage students actively.

Effective teaching strategies are critical in nurturing future educators who can adapt to diverse classroom settings.

Innovation Teaching Methods:

Innovation in teacher education is vital for producing adaptable and effective educators. Institutions are advised to integrate technology-based teaching techniques, simulations, and hands-on learning skills into their programs. These methods prepare future teachers to address the dynamic challenges of the modern classroom effectively.

Challenges in Achieving NAAC Accreditation in Teacher Education:

Resource Constraints:

Resource constraints are a significant challenge faced by many teacher education institutions in India. These boundaries, such as lack of acceptable funding, obsolete infrastructure, and a dearth of qualified faculty, obstruct their ability to satisfy the stringent standards established by the National Assessment and Accreditation Council (NAAC). A report from the Ministry of Education, India, highlights that insufficient financial resources are a significant obstacle to enhancing the quality of teacher education institutions (Ministry of Education, 2020). Additionally, outdated infrastructure and a lack of qualified faculty members further exacerbate the problem, limiting the institutions' capacity to enhance teacher effectiveness.

Resistance to Change:

Implementing changes in curriculum, teaching methods, and faculty qualifications can face resistance from traditionalists. Institutional cultures may resist adopting innovative practices, hindering the alignment of teacher education programs with NAAC criteria.

Faculty Development and Training:

Building a highly qualified and competent teaching faculty is an ongoing challenge for many institutions. We explore initiatives for faculty development and training aimed at meeting NAAC standards. According to Lott and Senna (2014), successful faculty development programs are crucial for assisting faculty members in adapting to the evolving needs of higher education and maintaining high standards of teaching quality.

Balancing Tradition and Innovation:

Many teacher education institutions in India are steeped in traditional practices. It is essential to balance these traditions with innovative methods to address the changing needs of students in a dynamic world. While traditional practices carry extensive cultural and historical significance, they may not always align

with current pedagogical methods or the strains of a globalized environment. Kumar and Mishra (2020) highlight that teacher education in India has factually been stranded in ritual, concentrating deeply on rote learning and teacher-centered instruction.

Assessment and Documentation:

The assessment and documentation process for NAAC accreditation indeed requires significant time and effort. According to a study by Pal et al. (2019), faculty members and administrators described that formulating for authorization took away from their consistent duties, counting teaching and research. Gathering evidence to demonstrate compliance with NAAC standards can be particularly time-consuming, as it often involves collecting data, writing reports, and documenting various aspects of institutional functioning.

Strategies for Enhancing Teacher Effectiveness and Achieving NAAC Ratings:

Collaborative Partnerships:

Institutions can work together with universities, research organizations, and industry partners to conversation resources, expertise, and best practices. These collaborations can increase faculty development, growth research opportunities, and deliver admittance to cutting-edge teaching methods. A study by Laredo, Salazar, and Castro (2017) indicates that such partnerships provide significant advantages, including improved faculty development, broader research opportunities, and access to innovative teaching strategies.

Faculty Development Programs:

Faculty development programs show a essential part in enhancing the quality of education in higher institutions. Investing in continuous professional development for faculty members is crucial as it motivates educators to acquire new skills and stay updated with modern pedagogical approaches (Smith, 2020). Through training programs, workshops, and incentives, faculty members are empowered to improve their teaching effectiveness and engage in lifelong learning (Jones & Brown, 2019). These creativities not only profit faculty members by ornamental their expertise but also donate to the overall achievement and fulfilment of students (Johnson et al., 2018).

Technology Integration:

Incorporating technology into teacher education programs has increased significant status in today's educational environment. Mishra and Koehler (2006) suggest that integrating technology can foster innovation and elevate instructional quality by equipping educators with tools and resources to design interactive and captivating learning experiences. Platforms for online learning, virtual classrooms, and

educational software deliver teachers with chances to testing with new teaching methods and adapt their instruction to address the diverse needs of students.

Strategies for Enhancing Teacher education and Achieving NAAC Ratings:

Curriculum Reforms: In the ever-evolving field of education, it is vital to frequently inform teacher education programs to keep pace with altering pedagogical practices, educational policies, and societal demands (Jones & Dindyal, 2019). Emphasizing hands-on, practical experiences within these programs is vital, as it connects theoretical knowledge with real-world application, equipping teachers to address the varied needs of modern students effectively.

Faculty Development: Faculty development is vital for teacher educators to stay existing with the latest teaching methods and educational research. Opportunities such as workshops, seminars, and exposure to actual applies play a key role in refining teaching quality and enhancing student learning outcomes.

Student-Centric Approach: A student-centric approach prioritizes the needs and experiences of students, with a focus on preparing them for success in diverse classroom settings. This approach highlights modified learning, student engagement, and nurturing a supportive learning environment where students feel appreciated and authorized to reach their full potential (Smith & Brown, 2020).

Research and Innovation: Promoting research in teacher education is essential for driving innovation and applying evidence-based methods. It allows educators to keep abreast of the newest plans, technologies, and theories, which supports them enhance their teaching methods and more successfully address the needs of a various student population.

Infrastructure Investment: Infrastructure investment is essential to support teacher education institutions in accessing modern teaching aids and technology. Allocating resources towards cultivating infrastructure can confirm that these institutions have the essential tools to deliver high-quality education and make teachers for the challenges of the 21st century.

Challenges and Opportunities that Teacher Education Institutes (TEIs) face in improving teacher effectiveness as per the National Education Policy (NEP) 2020:

The National Education Policy (NEP) 2020 emphasizes the importance of improving teacher effectiveness. Teacher Education Institutes (TEIs) are essential in developing the quality of teachers who will educate future generations. Here are some challenges and opportunities faced by TEIs in ensuring teacher effectiveness in line with the NPE 2020:

Challenges:

1. **Adapting to New Pedagogical Approaches:** Teacher education institutes face the difficulties of reorienting their curriculum and teaching methodologies to align with the advanced pedagogical approaches highlighted in NEP 2020, such as empirical learning, multidisciplinary education, and competency-based education (NEP, 2020).
2. **Ensuring Quality in Teacher Training:** Maintaining quality in teacher training programs while scaling up to meet the demand for skilled educators poses a significant challenge. Institutes must ensure that the training provided equips teachers with the necessary knowledge, skills, and attitudes to cater to diverse learners effectively (NEP, 2020).
3. **Integration of Technology:** With NEP 2020 emphasizing the integration of technology in education, teacher education institutes face the challenge of incorporating digital literacy and technology-enabled teaching methods into their training programs. This requires investment in infrastructure, resources, and faculty training (NEP, 2020).
4. **Addressing Equity and Inclusion:** Teacher education institutes need to address the challenge of promoting equity and inclusion in education, as highlighted in NEP 2020. This involves preparing teachers to cater to the needs of marginalized and disadvantaged groups, including persons with disabilities, rural learners, and those from socio-economically disadvantaged backgrounds (NEP, 2020).
5. **Continuous Professional Development:** Ensuring continuous professional development for in-service teachers poses a challenge for teacher education institutes. NEP 2020 emphasizes the importance of lifelong learning and ongoing skill enhancement, requiring institutes to offer flexible and accessible professional development opportunities (NEP, 2020).

Opportunities:

1. **Curricular Flexibility:** NEP 2020 provides teacher education institutes with the opportunity to redesign their curricula to align with the policy's vision of holistic and multidisciplinary education. Institutes can incorporate innovative courses, interdisciplinary modules, and practical experiences to enhance teacher effectiveness (NEP, 2020).
2. **Collaborative Partnerships:** Teacher education institutes can leverage partnerships with schools, educational organizations, industry stakeholders, and communities to enhance teacher training programs. Collaborative initiatives can facilitate hands-on learning experiences, mentorship opportunities, and exposure to real-world teaching contexts (NEP, 2020).

3. **Research and Innovation:** NEP 2020 encourages teacher education institutes to promote research and innovation in education. Institutes can seize this opportunity to engage in action research, develop evidence-based teaching practices, and contribute to the advancement of educational scholarship (NEP, 2020).
4. **Digital Learning Platforms:** The emphasis on technology integration in NEP 2020 creates opportunities for teacher education institutes to leverage digital learning platforms, online resources, and educational technologies to enhance teacher effectiveness. Institutes can use these tools for blended learning, flipped classrooms, and personalized professional development (NEP, 2020).
5. **Inclusive Practices:** NEP 2020's focus on inclusive education presents an opportunity for teacher education institutes to foster awareness, sensitivity, and competence in addressing diverse learning needs. Institutes can integrate modules on inclusive pedagogy, special education, and diversity awareness into their training programs (NEP, 2020).

Recommendations:

1. Regularly update teacher education curricula to align with current educational needs.
2. Invest in faculty development programs to enhance teaching skills.
3. Incorporate practical pedagogical training in teacher education.
4. Allocate resources for infrastructure improvement.
5. Establish effective assessment and feedback mechanisms.

Conclusion:

Teacher effectiveness plays a vital role in determining the overall quality of education. The NAAC accreditation process offers important perspectives on the difficulties encountered by teacher education institutions in India. Tackling these challenges is crucial for producing skilled and effective educators who can enhance student learning outcomes. By concentrating on aspects such as faculty qualifications, teaching methods, infrastructure, and technology integration, institutions can greatly improve teacher effectiveness and, consequently, the standard of education in India.

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Appendix – H

Similarity Report

Workload, Self-Efficacy and Teacher Effectiveness among Secondary Level School Teachers

By Prahlad Kirtania

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