



TEACHER EFFICACY OF JAWAHAR NAVODAYA VIDYALAYA TEACHERS

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Abstract

Teacher efficacy is an important component in teacher effectiveness that is consistently related to teachers' behaviour and student outcomes. The objective of the study was to examine the level of teachers' efficacy in relation to gender, experience, subject and qualification. The researcher used survey method and the sample of the study was 80 teachers of JNV. The researcher employed Teachers' Sense of Efficacy Scale developed by Tschannen-Moran & Woolfolk Hoy (2001) for data collection. The data was analysed in frequency count, percentage, and non parametric statistics and interpretation made accordingly. The finding of the study reveals that there is a significant difference in the level of teacher efficacy of teachers. 21.3% of the teachers have low level of teacher efficacy; 51.2% of the teachers have moderate level of teacher efficacy and 27.5% of teachers have high level of teacher efficacy. Male and female teachers have similar level of perception towards their teacher efficacy. Majority of male (49.23%) and female (60%) teachers have moderate level of teacher efficacy. The study has implications for improving the self-efficacy of teachers working in JNV and other Board schools.

Keywords: Teacher Efficacy, Jawahar Navodaya Vidyalaya, Gender, Experience, Subjects, Qualification

Introduction

Teachers are most fundamental element of the education system. Teachers play an essential and most prominent role in shaping the society, development of the country and in bringing qualified people to the society. The quality of teachers is of great importance for the effectiveness and success of education. The teachers who have qualifications and are competent are expected to guide their students' development rather than transferring knowledge. Teachers with high level of self-efficacy beliefs believe that they can increase students' success and motivation level. Teachers' self-efficacy has a positive influence on student achievement. Bandura (1977) defined teacher efficacy as a belief in a particular type of self-efficacy or in teachers' capacity to perform at a certain level (low or high). The indicator of teacher's efficacy can be explained by the methods of teaching and strategies teachers used by teachers for effective teaching. The efficacy level of the teacher determines the amount of effort made, the duration of encountering obstacles, the level of resilience in coping with failures, and the level of stress or

depression teachers experience when faced with difficult situations (Bandura, 1977; Ashton & Webb, 1986). Teacher efficacy has been defined as the extent to which a teacher believes he or she can influence students' behaviour and their academic achievement, especially of pupils with difficulties or those with low learning motivation (Ashton & Webb, 1986; Guskey & Passaro, 1994).

Beliefs in teacher efficacy influence teaching practice and attitudes towards the educational process, and hence the quality of teaching and learning. Teachers with high level self-efficacy perceptions respect different thoughts and try to apply new strategies and techniques for the development of their students. Teacher efficacy promotes students' positive school commitment and enables them to be benefit more from the learning-teaching environment. Teachers with a higher level of sense of efficacy express higher levels in planning and organisation; are more open to new ideas and have will to experiment with new methods to better meet the needs of the students; are less critical of students when they do mistakes; and are less likely to refer a difficult student to special education (Jerald, 2007). According to Tschannen-Moran & Hoy (2001), teacher's efficacy belief is a judgment of capabilities to bring about desired outcomes of student engagement and learning among those students who may be difficult or unmotivated.

Rationale of the Study

Teacher efficacy is a cognitive process on which teachers construct belief about their capacity to perform and positively impact students' outcomes. Teacher efficacy refers to teachers' confidence in their ability to promote students' learning (Woolfolk-Hoy, 2000). Teacher efficacy is an important component in teacher effectiveness that is consistently related to teachers' behaviour and student outcomes. Some of the relevant research studies on teachers' efficacy are discussed in following paragraphs:

Shah & Bhattarai (2023) explore the factors contributing to teachers' self efficacy of Nepali teachers and revealed that the four factors: efficacy in students' engagement, instructional preparation. Behavioural competence and teaching skills contributes to Nepali teachers' self-efficacy. Sabic et al. (2022) conducted a study on 6613 elementary and secondary school teachers to examine the moderating effect of age on gender differences in teachers' self-efficacy for using information and communication technology in teaching as well as possible variables underlying this effect and stated that there is a similar level of self-efficacy for using ICT among young male and female teachers. Li et al. (2022) investigated the levels of self efficacy of music teachers in primary and secondary schools and revealed that middle school teachers have low self efficacy compared to teachers in primary schools. Ahmed et al. (2022) did a research on 207 biology teachers and stated that the level of teachers' self efficacy was moderately high. There was a positive correlation between teachers, self efficacy and students' self-efficacy. Takunyaci (2021) conducted a research on 165 mathematics teachers to examine secondary mathematics teachers' efficacy beliefs about teaching mathematics in terms of some variables and pointed out that there is a medium level of mathematics teachers' beliefs about mathematics teaching. Male teachers have significantly higher personal mathematics teaching efficacy beliefs than female teachers. Allouh et al. (2021) investigated primary school teachers' self-efficacy beliefs regarding online teaching during the Covid-19 and found that there is no significant difference between self-efficacy in relation to gender and age of the teachers. The teachers with more

number of teaching experiences have perceived more self-efficacy. Akman (2021) did a research on 401 teachers to examine the relationships among teacher leadership, teacher self efficacy and teachers, views and stated that there is a high level of self-efficacy perception in teachers. Puliatte et al. (2021) conducted a study on 60 pre-service teachers to to examine pre-service teacher self-efficacy and attitudes towards inclusion and revealed that pre-service teachers have high self-efficacy. Lay (2021) worked on 151 primary school teachersto explore the relationship between teachers' efficacy and classroom management practice in Monywa Township in Myanmar and found that that if the teachers' efficacy is high then their classroom management practices will be high. Ozdemir et al. (2020)conducted a study on of 435 teachers for quantitative data and 24 teachers for qualitative data and revealed that there is a significant medium relationship between teachers' self-efficacy and principals' instructional behaviour. Rezaeian & Abdollahzadeh (2020)stated that there is no differences in perception among teachers across all the subscales of teacher self-efficacy with reference to age, experience, and gender of the teachers. Upadhyaya (2019)worked on 150 secondary science teachers to investigating the level of self-efficacy of science teachers towards student engagement and found that science teachers have moderately high efficacy level in all aspects of emotional engagement of students. Orange (2018)carried out a research entitled teachers understandings of evaluation and teacher self-efficacyand pointed that all teachers had a strong sense of teacher efficacy and teacher effectiveness. Feedback and self-reflection were important aspects of the evaluation process that may positively impact teacher efficacy. Lesha (2017) revealed that there is a significant difference between male and female teachers on student engagement and classroom management. The male teachers were significantly better in classroom management and student engagement than female teachers. Menon & Sobha (2017) worked on teacher efficacy of secondary school teachers and stated that teachers having an average level of teacher efficacy. There is no significant difference in teacher efficacy with respect to subject, gender and locale. There is significant difference in teacher efficacy with respect to teaching experience and type of management. Kaur & Paramjot (2016) revealed that there is significant difference in teacher efficacy of teachers teaching in rural and urban schools and no significant gender difference in scores of teacher efficacy of secondary school. The teacher efficacy of teachers teaching in urban area is more as compared to teachers teaching in rural area. Zai (2016) found that female teachers have a higher sense of efficacy in student engagement, instructional strategies, and classroom management than male teachers. Sarfo et al. (2015) pointed out that teachers have relatively higher self-efficacy beliefs especially at the student engagement. The male and female teachers differed in relation to their instructional strategies. The female teachers have better instructional strategies efficacy than male teachers. While both male and female teachers did not differ in terms of classroom management and student engagement efficacies. Page et al. (2014) revealed that the teachers at the urban elementary school displayed significantly lower scores on the teachers' sense of efficacy than the teachers at suburban and rural schools. Moalosi (2013) found that the males and females did not differ in how they manage the classroom behaviors. The teachers having more than 20 years' teaching experience performed slightly higher in classroom management than the teachers having less experience. Achurraa & Villardonb (2012) stated that the perceived self efficacy of teachers is very high.

Review of research on teacher efficacy suggests that only few studies have been conducted in India and researcher does not found any research study on teacher efficacy of Jawahar Navodaya Vidyalaya (JNVs) teachers. Hence, conducting study on teacher efficacy of Jawahar Navodaya Vidyalaya's teachers in Patna Region is relevant.

Objectives

- To study the level of teacher efficacy of teachers working in Jawahar Navodaya Vidyalaya.
- To compare the level of teacher efficacy of teachers working in Jawahar Navodaya Vidyalaya with reference to gender, experience, subject and qualification.

Research Questions

- What is the level of teacher efficacy of teachers working in Jawahar Navodaya Vidyalaya?
- Is there any difference in the level of teacher efficacy of teachers working in Jawahar Navodaya Vidyalaya with reference to gender, experience, subject and qualification?

Method

The researcher used survey method. The 80 teachers were selected through purposive sampling technique from 20 JNVs of Patna Region. The tool employed for data collection was teachers' sense of efficacy scale developed by Tschannen-Moran & Woolfolk Hoy (2001). The tool having total 24 items grouped into three subscale: efficacy in student engagement, efficacy in instructional practices, and efficacy in classroom management (8 items in each subscales). Instead of employing a 9-points Likert scale as in its original tool, the researcher used a 5-points Likert scale from 1 - Nothing to 5 - A great Deal. The researcher has taken the permission from the developer of the tool to use it for data collection.

Data analysis and Interpretation

The collected data are analysed as per the objectives of the study. The researcher analysed the data in frequency count, percentage, and non parametric statistics used for data analysis and interpretation which are presented in the following paragraphs.

The investigator has grouped the responses of the teachers about their teacher efficacy is presented in the table-1.

Table-1: Levels of teacher efficacy of teachers

Level	Frequency	Percentage	Chi Square	Level of Sig
Low	17	21.3	12.025	.002
Moderate	41	51.2		
High	22	27.5		

The table-1 depicts that 21.3% of the teachers have low level of teacher efficacy, 51.2% of the teachers have moderate level of teacher efficacy and 27.5% of teachers have high level of teacher efficacy. The chi-square value is 12.025, which is significant at 0.01 levels. Hence it can be inferred that there is a significant difference in the level of teacher efficacy of teachers. The level in teacher efficacy of teachers working in JNVs is graphically presented in the figure-1.

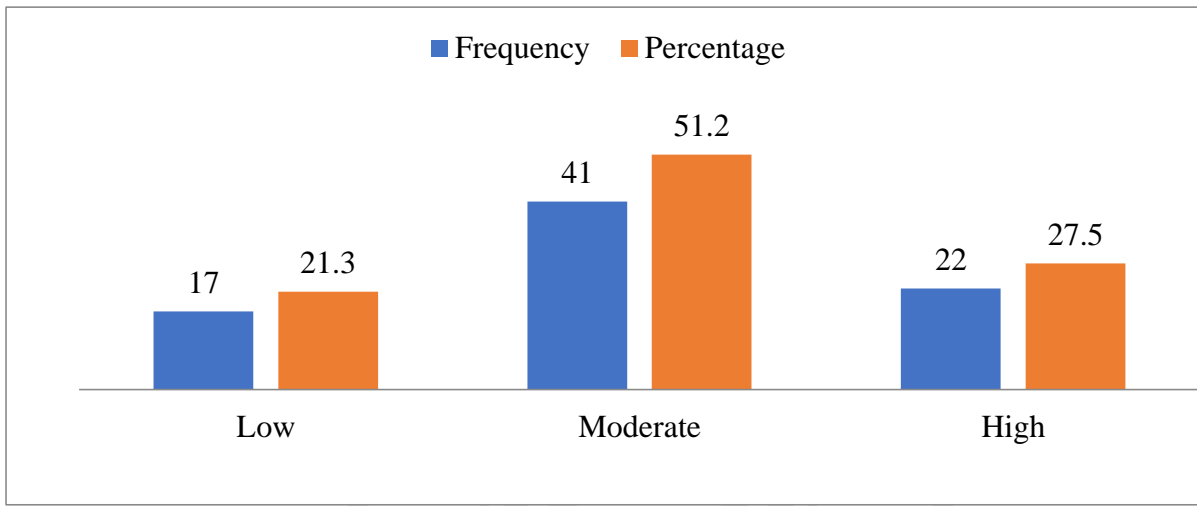


Figure-1: Percentage of levels of teacher efficacy of teachers

The investigator has grouped the responses of the teachers about their teacher efficacy on the basis of the score obtained in terms of their gender, which is presented in the table-2.

Table - 2: Levels of teacher efficacy (gender wise)

Level	Male (N & %)	Female (N & %)	Maann-Whitney test	Level of Sig
Low	14 (21.53)	3 (20)	460.00	.734
Moderate	32 (49.23)	9 (60)		
High	19 (29.23)	3 (20)		

The above table - 2 indicates that the 21.53% of the male teachers and 20 % of the female teachers have low level of teacher efficacy, 49.23% of male teachers and 60% of the female teachers have moderate level of teacher efficacy and 29.23% of male teachers and 20% of female teachers have high level of teacher efficacy. Hence it can be said that majority of male and female teachers have moderate level of teacher efficacy. The Mann-Whitney value (460.00) which is not significant at .05 level. Hence, it can be inferred that male and female teachers have similar perception towards their teacher efficacy. The level of teacher efficacy of male and female teachers is graphically presented in the figure-2.

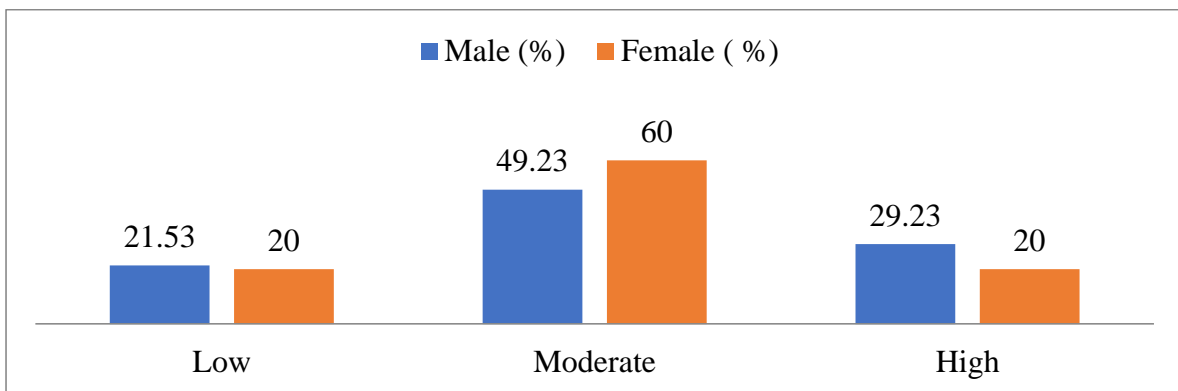


Figure-2: Percentage of levels of teacher efficacy of teachers (gender wise)

The investigator has also grouped the responses of the teachers about their teacher efficacy on the basis of the score obtained in terms of their experience, which is presented in the table-3.

Table-3: Levels of teacher efficacy of teachers (experience wise)

Level	Up to 15 years (N & %)	16 years and above (N & %)	Mann-Whitney Test	Level of Sig
Low	7 (18.42)	10 (23.80)	711.00	.401
Moderate	19 (50)	22 (52.38)		
High	12 (31.57)	10 (23.80)		

The table- 3 indicates that 18.42% of teachers having teaching experience up to 15 years and 23.80% of teachers having the teaching experience 16 years and above have low level of teacher efficacy, 50% of teachers having teaching experience up to 15 years and 52.38% of teachers having the teaching experience 16 years and above have moderate level of teacher efficacy and 31.57% of teachers having teaching experience up to 15 years and 23.80% of teachers having the teaching experience 16 years and above have high level of teacher efficacy. The Mann-Whitney value (711.00) is not significant at .05 levels. Hence, it can be inferred that teachers having teaching experience up to 15 years and teachers having 16 years and more teaching experience have similar level of teacher efficacy. The level of teacher efficacy of teachers in relation to experience is graphically presented in the figure-3.

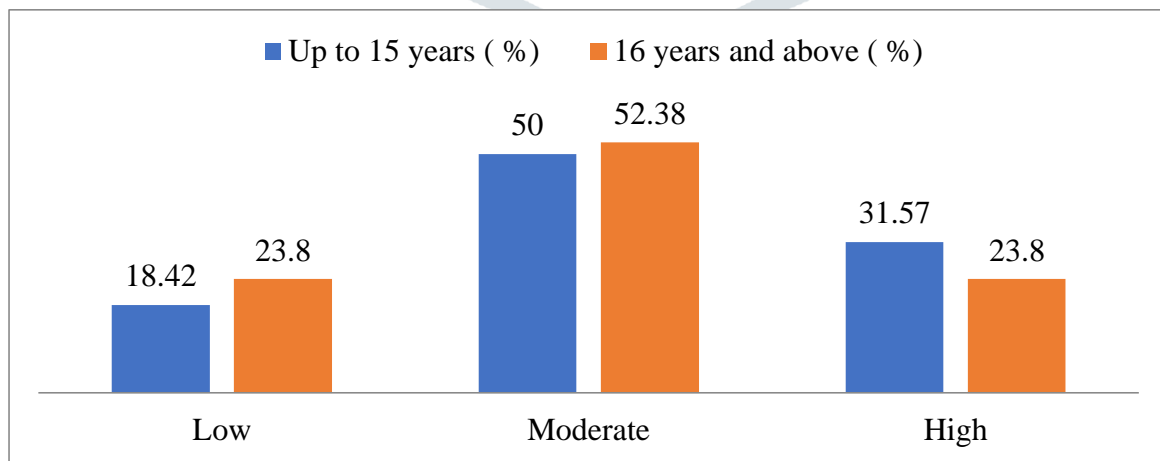


Figure- 3: Percentage of levels of teacher efficacy of teachers (experience wise)

The investigator has also grouped the responses of the teachers about their teacher efficacy on the basis of the score obtained in terms of their subjects, which is presented in the table-4.

Table-4: Levels of teacher efficacy of teachers (subject wise)

Level	Science (N & %)	Mathematics (N & %)	Social Science (N & %)	Language (N & %)	Kurskal Wallis test	Level of Sig
Low	4 (20)	5 (25)	6 (30)	2 (10)	.725	.867
Moderate	11 (55)	10 (50)	8 (40)	12 (60)		
High	5 (25)	5 (25)	6 (30)	6 (30)		

The table – 4 depicts that 20% of science teachers, 25% of mathematics teachers, 30% of social science teachers and 10% of language teachers have low level of teacher efficacy. 25% of science teachers, 25% of mathematics teachers, 30% of social science teachers and 30% of language teachers have high level of teacher efficacy. Majority of the teachers (55% science teachers, 50% mathematics teachers, 40% social science teachers and 60% language teachers) have moderate level of teacher efficacy. The Kurskal value (.725) is not significant at .05 levels. Hence, it can be inferred that all teachers have similar level of teacher efficacy. The level of teacher efficacy of science, mathematics, social science and language teachers is graphically presented in the figure-4.

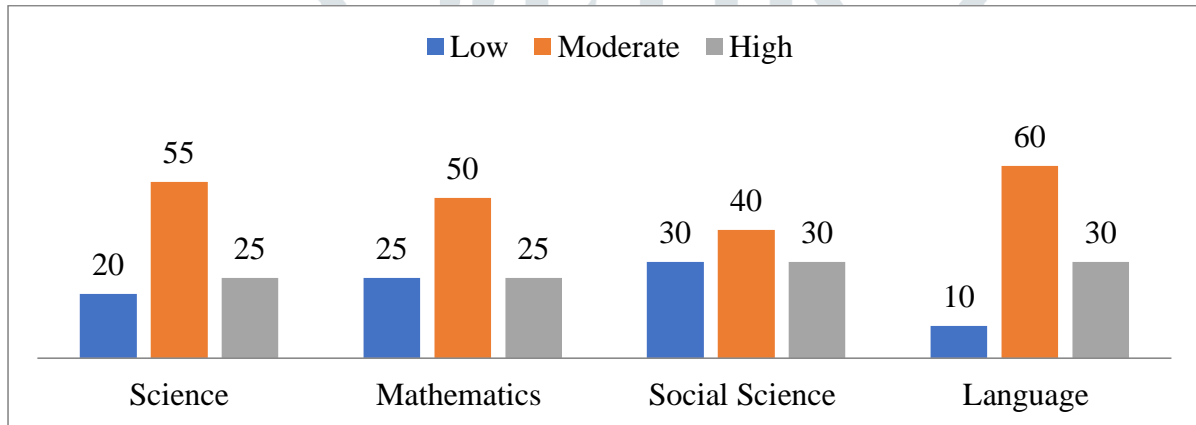


Figure-4: Percentage of levels of teacher efficacy of teachers (subject wise)

The investigator has grouped the responses of the teachers about their teacher efficacy on the basis of the score obtained in terms of their qualification, which is presented in the table-5.

Table - 5: Levels of teacher efficacy of teachers (qualification wise)

Level	Graduation (N & %)	Post graduation (N & %)	M.Phil/Ph.D. (N & %)	Kurskal Wallis Test	Sig
Low	2 (50)	13 (19.11)	2 (25%)	.205	.903
Moderate	1 (25)	37 (54.41)	3 (37.5)		
High	1 (25)	18 (26.47)	3 (37.5)		

The table – 5 depicts that 50% of teachers having graduation degree, 19.11% of teachers having post graduate degree and 25% of teachers having M.Phil/Ph.D. degree have low level of teacher efficacy. It is clear from the table that 25% of teachers having graduation degree, 54.41% of teachers having post graduate degree and 37.5% of teachers having M.Phil/Ph.D. degree have moderate level of teacher efficacy. 25% of teachers having graduation degree, 26.47% of teachers having post graduate degree and 37.5% of teachers having M.Phil/Ph.D. degree have high level of teacher efficacy. The Kurskal Wallis value (.205) is not significant at .05 levels. Hence, it can be inferred that all teachers of different qualification have similar level of teacher efficacy. The level of teacher efficacy of teachers having graduation, post graduation and M.Phil./Ph.D. degree is graphically presented in the figure-5.

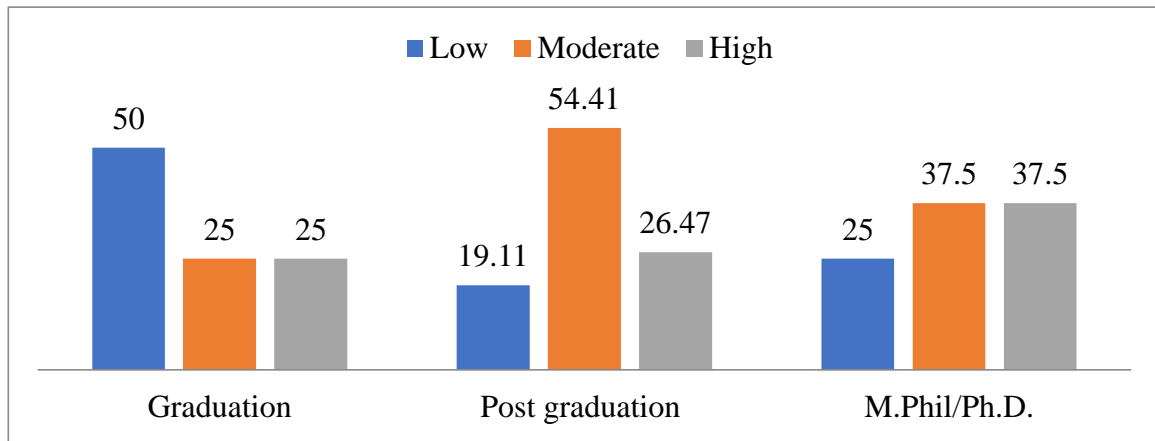


Figure-5: Percentage of levels of teacher efficacy of teachers (qualification wise)

Major Findings

- 21.3% of the teachers have low level of teacher efficacy; 51.2% of the teachers have moderate level of teacher efficacy and 27.5% of teachers have high level of teacher efficacy.
- Male and female teachers have similar level of perception towards their teacher efficacy. Majority of male (49.23%) and female (60%) teachers have moderate level of teacher efficacy.
- Teachers having teaching experience up to 15 years and teachers having 16 years & more teaching experience have similar level of teacher efficacy. Majority of teachers have moderate level of teacher efficacy with reference to teaching experiences.
- The teacher efficacy among the different subject (science, mathematics, social science and language) teachers has similar level of teacher efficacy. Majority of the teachers (55% science teachers, 50% mathematics teachers, 40% social science teachers and 60% language teachers) have moderate level of teacher efficacy.
- The level of teacher efficacy among the teachers with different educational qualification is same. Majority of the teachers having post-graduation degree (54.41%) have moderate level of teacher efficacy.

Discussion of Results

The focus of this research was to examine the level of teachers' efficacy in relation to gender, experience, subject and qualification. The researcher found that majority (51.2%) of teachers has moderate level of teacher efficacy. The finding of the study was not supported by the previous studies of Upadhyaya (2019) and Orange (2018). The finding reveals that the teachers' self-efficacy levels were high among the teachers. The researcher also found that there is no significant difference in the level of teacher efficacy among the teachers with respect to gender, experience, subject and qualification. The finding was supported by the previous study of Rezaeian & Abdollahzadeh (2020), stated that teachers have no differences in perception across all subscales teacher self efficacy with reference to experience and gender. The findings is also supported by Menon & Sobha (2017) with reference to gender and subject but not supported with reference to experience. Menon & Sobha (2017) stated the there is no differences with reference to gender and subject but there is significant difference with reference to teaching experience in the teacher efficacy of teachers.

Conclusion

Teachers' self-efficacy enhances the self confidence of teachers and plays a vital role in becoming effective in increasing student's achievements. If a teacher has a high level of self-efficacy, then they are more effective and have more teaching effectiveness. The present study will have an influence on school education by increasing the self-efficacy of teachers in order to assure teacher effectiveness through in-service training. The present study helps teachers to become more effective at enhancing student's achievements by ensuring teacher effectiveness. It is important for education stakeholders to take care of teachers' personal issues to help them to develop good and active interpersonal skills, especially the school administrators. They must ensure that teachers have good working environment conditions to encourage the teachers to teach effectively in the classroom.

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