
Qualities of Effective Teachers; Factors Affecting the Teachers Commitment

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Abstract

Teaching is a demanding and complex craft. It is impossible to discuss in a page or two the characteristics and input of an effective teacher. Effective teaching is the fundamental ingredient for the success of every student. Teachers are the central figure of the educational infrastructure of any country, and have a huge role to play in shaping the destiny of their nation. It is a noble and selfless profession. The following paper provides an introduction to the literature regarding Teacher effectiveness. This paper displays the input of the teacher in a society, what challenges they have to counter, and what recommendations can be implemented to improve the development and effectiveness of the teachers. In this study the impact and importance of effective teachers in being investigated through the feedback from both the teachers and the students. And a comparison and inter relationship between the both opinions is being developed. On the other hand Lack of teacher commitment is one of the key factors that have the potential to cause the shortage of effective teachers all over the world. There are multiple factors that might cause teachers to leave their jobs. These can be low salaries, extravagant workload, poor working conditions, low quality of teacher preparation programs, inefficient leadership etc. In the following research work a qualitative and quantitative method was implied to study the working condition environment and teacher attrition patterns. It was seen that school with satisfactory and proper working conditions displayed a better commitment and lower attrition rates. This study also documented the patterns of teacher retention rates across multiple schools, which had different policies, and student demographics.

Keywords: Effective teachers; Teacher’s job satisfaction; administration; Teacher retention; Teacher characteristics; Teacher’s commitment.

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1. Introduction

The following research paper discusses the role of teachers, and the qualities that effective teachers display. The importance of teachers for a society can be understood from the famous saying of Helen Caldicott.

“Teachers, I believe, are the most responsible and important members of society because their professional efforts affect the faith of the earth.”

School teachers have the important responsibility of shaping the thought process of children [1]. Right and quality education is the fundamental right of all the children. To improve the quality of education in a society, making the teachers more effective and efficient is the best method. Several studies have found that the teacher effectiveness is in direct relation with the student achievement [2-5]. However, the study of teacher effectiveness is a diverse and complex phenomenon and demand extensive research. There have been many studies about the teacher effectiveness, but very limited research has been done to study the factors and method that can be implied to improve the teacher’s effectiveness. The following research will look into this scenario in detail. Evaluation of teacher effectiveness through student surveys and impact of leadership on teachers will also be studied and looked into. Teacher effectiveness is of vital importance for countries that have a higher pupil to teacher ratio. And require the improvement in the quality of teaching methods for the better future of their nation [6]. Effective teachers possess thorough knowledge about their subjects, skills and topics. They have the ability to inspire students to achieve their goals. They also have comprehensive understanding how student will be able to best learn, understand concepts and master skills. Through their knowledge and experience about the learning concepts an effective teacher is able to determine how they can help particular students in learning successfully. This paper looks into the importance of effective teachers and measure of their skills through surveys, already done researches, materials and methods and will recommend how these skills can be taught or developed in teachers [7]. Furthermore, this paper will also look into the other key factors that have either a positive or negative impact on teacher’s commitment. These factors are diverse in nature and are related to multiple factors such as rewards and incentives, work environment, role of leadership, mental health of the teachers, teacher’s area of expertise and subjects, location, age, gender etc. Low teacher commitment is one of the driving factors into the shortage of effective teachers all over the world [8-10]. In United States multiple researchers and in Europe the European Union conducted a large scale study in order to understand and derive methods to improve teacher’s commitment and overcome the lack of effective teachers [11, 12]. In the US, the National Commission on Teaching and America’s Future’s called the shortage of effective teachers as a national level crisis [13, 14]. Similarly in United Kingdom, around 30% of teachers leave the teaching profession within the initial five years of their job [14]. This study will look into the factors that cause a lack of commitment among the teachers and will provide with recommendations that can be implemented to overcome these issues [15].

2. Literature review

This section provides a review of literature from the recent past, which focused upon multiple factors affecting the commitment and effectiveness of teachers. A relation between this research and previous literature will be

developed and studied over the course of this research paper.

2.1. Factors affecting the teacher's commitment

Research Study done by Joan. L Whipp and his team was focused on the size, student demographics, minority status of the institute population, working conditions (administrative support, instructional resources, mentoring), type of institute (public, charter, private) and location. This analysis described that the teacher prefer to work in institution and districts with greater number of White students who show good performance on standardized tests [16].

2.1.1. Deciding criteria for teacher's commitment

Other researches showed mixed results for the different factors that teachers focus on while deciding about their commitments and leaving a particular school. Most of the teachers suggested that a combination of collegial relationship, leadership, and work culture were important for them while deciding their commitments [17-19]. According to another notable finding in the above study the teachers are less likely to leave a school or institution if the leadership is of the higher quality. In another study Boyd and his colleagues surveyed about different working conditions that might cause a teacher to resign from a particular school. These conditions were dissatisfaction with administration or colleagues, school facilities, classroom autonomy, emphasis on testing, teaching assignments, safety etc. Out of all these conditions dissatisfaction with the administration was by far the greatest factor that teachers might consider while making their decision to leave or stay at an institution [17]. Furthermore, in another research work done by Ingersoll and May; it was concluded that although the leadership and administration was a key factor for teachers while deciding on their commitments. But for the Math teachers the classroom autonomy (in text, content, teaching techniques, grading and material) was the main factor. Similarly for the science teachers the salary was the greatest retention factor [20].

2.1.2. Impact of Race on Teachers Commitment

According to the research work done by Borman and his team it was concluded that the teachers of color were more committed to their job, and were less likely to leave teaching as compared to their White counterparts [21-23]. However, some recent studies have results opposite to this, and believe that white teachers were seen to be more committed to their job [24, 25]. Another study from the recent times concluded that the newly appointed teachers of color (American, Latina/o, African, Asian, mixed race) were found to be more committed to the teaching job and were less likely to quit as compared to white teachers [26-30].

2.1.3. Impact of Qualification on Teacher Commitment

Studies about the teacher qualifications have produced mixed results. According to some old studies from the past it was concluded that teachers with higher scores on tests showed a higher attrition rate [31, 32]. In another study by Eckert it was revealed that the teacher qualification was one of the few measures to predict teacher efficacy, but wasn't a successful predictor of urban teacher's early career [16, 33]. A further study divides teacher's commitment into three broad categories. These are commitment to the profession, commitment to the

organization and commitment to the student [34].

2.1.4. Commitment to the organization

It deals with acceptance of the organizational motives, goals and values, along with the willingness to put in the effort on behalf of organization [35]. Commitment to the organization develops a sense of affiliation, and community [36]. There are many factors that influence the organizational goals, such as acceptance and belief in organizational goals [35, 37]. degree of involvement in the decision making process, [38] orderly climates that support learning [38, 39], and student achievement [38, 39].

2.1.5. Commitment to teaching

Firestone suggested in his research that a higher level of commitment is experienced when the teachers feel a sense of purpose or relevance in their work.[40] Without the presence of relevance teacher might experience emotions of frustration. This might cause them to leave teaching completely and feel attracted towards alternative professions [41].

2.1.6. Commitment to students

The concept of teacher commitment towards their student can be categorized as the commitment for individual students, [36] or the commitment towards student learning [34]. Hoy and his team described teacher's commitment as the committed behavior of the teacher towards both the intellectual and social developments of their pupils [42, 43]. It also involves teacher's will to help their students learn regardless of all social background or academic difficulties faced by them [34, 44].

2.2. Qualities of effective teachers

Parihar in his research work viewed the ideal teachers as the avenues of teaching skill who consistently thrive to achieve their targets, which cast either a direct or indirect impact upon student education. An effective teacher will implement strategies to achieve his goals and adapt to the changing needs with orientations in his own teacher education. According to this study there are multiple factors like reduced class size, family and the community influence, curricula, district funding and class size in determining the performance of an institution or school. But the most critical factor is the teachers. Choice of effective teachers is critically vital for the performance of a school [45].

2.2.1. Skills of effective teachers

Effective teachers will have certain qualifications and skills. These will include their communication skills, their verbal ability, knowledge of special needs, and subject knowledge that is to be taught. According to Ronald.. Heck results instructional planning, keeping students engaged, using right instructional strategies, monitoring and differentiating learning quality for individual student are key characteristics that an effective teacher will possess. Ronald H. Heck also studied the relation between the teacher effectiveness and student achievement

where he investigated a multilevel cross classified model. The study showed that the impact of successive teachers is in direct relation with student achievement. Secondly, collective effectiveness of the teaching staff of and organization was associated with the achievement levels in a positive manner [3].

2.2.2. The importance of Teacher Effectiveness

Similarly in another Study done by E. Block and his team revealed that it is imperative for a teacher to develop himself with time to enable himself improve his effectiveness. The impact of an ineffective teacher will be deteriorating for the hard work of the other teachers; and will cause significant damage to the reputation of the institute [46]. Andreia Ramona along with her team did research on the Effective teacher characteristics. The research focus was on the professional and personal attributes of teachers. According to this work the teenage students appreciated certain traits of teachers. These were their calm, presence, tolerance, sense of humor, and a well prepared teacher. The following study also focused on a self-assessment test for teacher. According to which teachers can identify what is wrong or right with their communication, behavior or presence in class. Every teacher has the opportunity to improve their manner of acting, thinking, and teaching in the class [7].

2.2.3. Teaching Methods

In another investigation about the effective teaching, it was stated that certain attributes in their teachers enable students to connect and understand them better [47]. These can be them being friendly, respectful, fair, compassionate, and forgiving. In another research work 12 characteristics of an effective teacher were defined. These were a positive attitude, proper preparation, a sense of belonging high expectations, creativity, sense of humor, respectable, fair, compassionate, forgivable and looking at mistakes as a natural phenomenon [48]. Another study was conducted including high school students, who were asked to vote for the best characteristics they found in their teachers. According to them the best teacher was the one who organized and explained their lectures properly, and described the topics with diverse examples. Furthermore, according to them an excellent teacher was one who has friendly nature, sociable, fair, patient, joyful along with a good nature and understanding about its students [48].

2.2.4. Command of language

In a research about the importance of teacher's command on language, the most important characteristics possessed by good language teacher were [49];

- Command over the particular language
- Giving understandable, clear and interesting information
- Being fair towards the students
- Availability for the students

According to Park and Lee work the opinion of English language teachers and the students contradicted on three different fronts: known as [50].

- Pedagogy
- Subject matter knowledge
- Socio-affective strategies

Apart from this there was a certain difference between the perception of a low achieving and high achieving student about the teacher. The low achieving student favored socio-affective skills and pedagogical knowledge more, as compared to the high achieving student that liked the diverse attributes more. Apart from this the female and male students also displayed different characteristics while discussing socio-affective skills [48].

2.3. Motivation factors of teachers

Over the years policy experts measured, studied and explained teachers main motivation in terms of rewards and incentives [51-53]. However, in the recent times the policy experts focus have shifted from rewards and incentives to other key factors like reform adoption, systemic change and evaluation, school leadership, and accountability [54-57]. According to the multiple research works done on this issue it was concluded that rewards are not effective for improving student achievement, promoting teacher learning and improving classroom practices [53, 58-60].

2.3.1. Impact of incentives and accountability

Yuan and his colleagues conducted an experiment named as “pay for performance” that involved 296 middle school mathematics teachers. According to his finding most teachers didn’t find this additional pay motivating, and no major change in the teachers performance, classroom practices or students achievement was seen [60]. Similarly, the research work done by Firestone concluded that the evaluation policies that included salary increases, compensations and rewards actually had an adverse effect and teachers felt discouraged [57]. Research by Jacob and his team suggested that the accountability plays a vital role in teachers development and motivate them to improve the outcome and quality of teaching [61].

2.3.2. Motivation to learn

According to the multiple research works regarding the teacher’s motivation to learn, there are several factors that cast their impact over it. These factors can be accountability, student achievement, district and school environment, political contexts, and PD requirements [62-66]. Apart from these studies there were multiple other research works that agreed to this phenomenon. However in the following research multiple motivating factors for teachers learning were brought into the light. One major finding of this research work was that the rewards that teachers assume might be motivating for their professional learning are different from the widely practiced rewards by the administrations and policy making teams [56, 57, 67]. According to these finding focus of administrators is on PD accountability and requirements rather than the teacher’s learning. Furthermore, building an environment that supports teacher learning, creating opportunities for content specific, small, and collaborative learning is vital [68, 69]. Another major factor is that if the teacher professional communities are not looked after by the districts and administrations they will most probably will diminish over

time [70]. Figure below describes and shows the different factors and their interrelation that cast an impact on the motivation for a teacher [70].

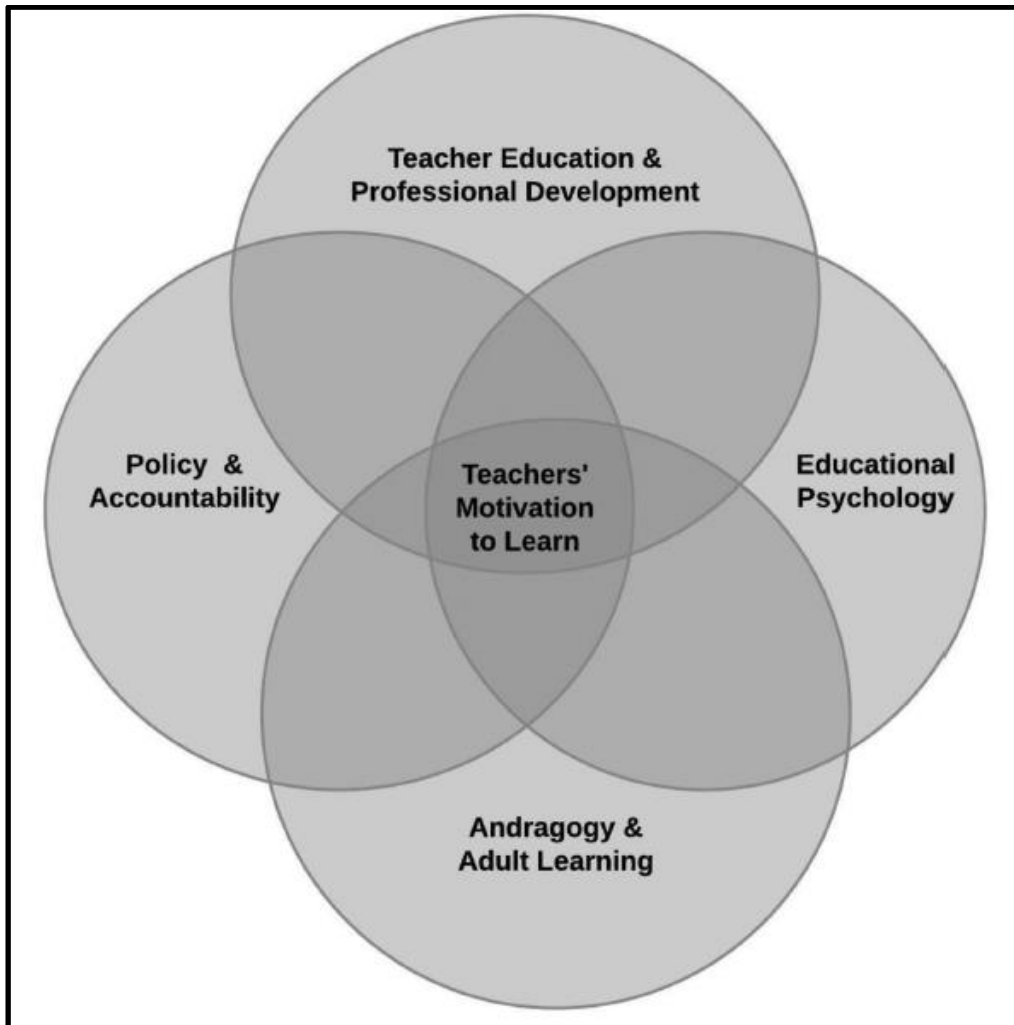


Figure 1: Different factors affecting the teacher motivation to learn [70]

A. Appova conducted his research in the form of a brief survey in which 36 teachers participated. The results revealed the different motivations that, if fulfilled, can help school leaders retain teachers. Brief results from this survey are shown in the table below.

Table 1: Survey regarding teacher motivation [70]

Motivation	Result (out of 36 teachers)	Description
To influence students and their learning	36	Teachers want to learn and cause a positive influence on students, and fulfill their learning needs
To learn from each other	26	Teachers are motivated to learn from each other for their own individual growth
To become a better teacher	22	Teachers are motivated to enable themselves improve professional confidence, efficacy and classroom instructions
To fulfill professional development requirements	16	Teachers feel motivated with regular professional development, reinforcements that provide them with quality learning environment
To constantly engage and seek in the habit of learning	13	Teachers are motivated to participate in PD as they know there will always be something to learn
To study the topics of their interest	11	They feel motivated to enhance their knowledge about the topics they feel interested in
To learn further if resources are provided	11	Teachers feel motivated if they are provided with funds, resources and time to learn and further enhance their skills, especially through PD

2.4. Satisfaction determinants

According to the research work by Sims there are several factors that cast an impact on work satisfaction for teacher [71]. These can be career advancement opportunities, school leadership, and school discipline etc. Other factors can be personal characteristics of the teacher, motivational beliefs, professional characteristics, institution composition and institution working conditions [72]. According to Malinen and his colleagues, teachers who thought of student behavior and teacher collaborations higher at the start of the school year, had a better level of job satisfaction at the end of the year [73].

2.4.1. Impact of gender on Job satisfaction

Sims and co. did their research about the effect of the age factor on the teacher's job satisfaction.[74] According to the same study the gender had no impact on the job satisfaction [22, 23, 75, 76]. In their work found that in US the young teachers resign from their schools at a higher rate as compared to their women or middle aged male colleagues. Allen after conducting his research suggested in his report that the younger female teachers leave their jobs due to family reasons and tend to return to teaching sector afterwards [77]. However, there is quite a large inconsistency in the research works that compare teacher gender and job satisfaction. Work done by Crossman and Harris showed no difference in the job satisfaction results based on the gender for English teachers [78]. While in another study conducted by Poppleton & Riseborough found that women were more happy and satisfied with their teaching jobs [79]. Results for similar studies from US and Canada were quite

inconsistent as according to some studies women were more satisfied with teaching jobs while some research works concluded through their results that men were happier being in the teaching profession [80-83]. Poppleton & Riseborough's research also revealed complex socio-cultural factors that create a perception of job satisfaction in teachers [79].

2.4.2. Impact of specialization on Job satisfaction

On the other hand the factors like professional development, subject knowledge, and teaching experience will also have an impact on the job satisfaction. According to work done by Sims, teachers who had their major in science, engineering, technology and mathematics were less likely to leave their jobs [74]. However, no direct relation between the subjects and the job satisfaction was found. The report discussed by Allen, provided concrete evidence that high and secondary school teachers were more likely to attrition as compared to elementary school teacher. In another study it was revealed that the chances of teacher attrition were higher during the initial five years of service [75, 77].

2.4.3 Teacher working conditions

According to the research by Lundahl, the impact of marketization has been evident on the education sector like the other fields of life, but due to marketization the academic, social, economic and professional impact on teachers is much more intense [84]. According to a research in Sweden, there can be a shortage of about 80,000 teachers alone due to the impact of added pressure on teachers caused by marketization [85]. According to a survey only 11% of Swedish teachers believe that the society respects and values teaching as a profession [86, 87].

2.4.4. School environment

In the following research the impact of working conditions on teacher effectiveness, motivation and job satisfaction was calculated. The following research also looked into critical factors like quality of teachers work, feasible workload, adequate resource management, opportunities for professional development, collegial cooperation, etc [88]. In an international context, **Sims** analyzed data for 35 different countries. According to his findings teacher cooperation and student discipline were in a positive relation with the job satisfaction throughout all the countries [74]. Another study by **Borman** and his team revealed that schools that offered administrative support to their teachers, provided them with mentoring programs at the start of their career and proper opportunities for cooperation and networking, displayed lower attrition rates as compared to the institutions without these features [23].

2.5. The role of leadership on teachers' performance

According to the research work done to understand the role of leadership i.e. Principals is second to teachers in determining the student achievement [89]. Leadership has an influence on processes, structures, and eventually teachers [90, 91]. According to Ross and Gray, School leaders can play a significant part in student learning outcomes through teacher self-efficacy [92]. Over the years a large number of studies that focused on the

relationship between teacher self-efficacy and leaderships examined the impact of transformational leadership [93, 94]. However, Nir and Kranot (2006) in their research contradicted with the conventional literature on the impact of leadership. They suggested that there is no direct impact of the leadership on a teacher's performance. According to them the relationship is indirect and is mediated by the job satisfaction of the teachers [94]. On the contrary, Calik and his partners, supported a significant and positive relation between teacher self-efficacy and instructional leadership [95]. A study conducted shown below, looked into the impact of leadership for teachers. The results from the following study are shared below.

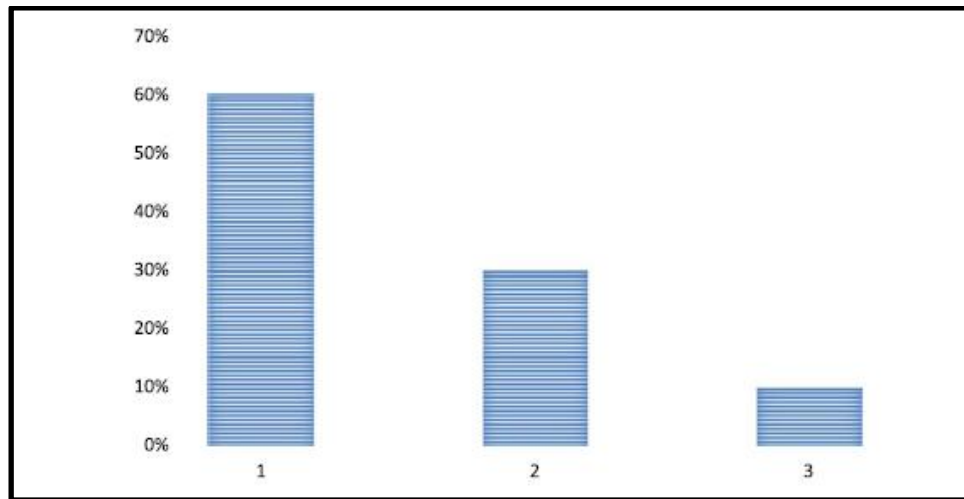


Figure 2: Role of leadership in teachers performance 1. YES, 2. No, 3. cannot be determined [47]

According to this study 60% of the teachers thought that leadership have a massive role to play in the performance of the teachers.

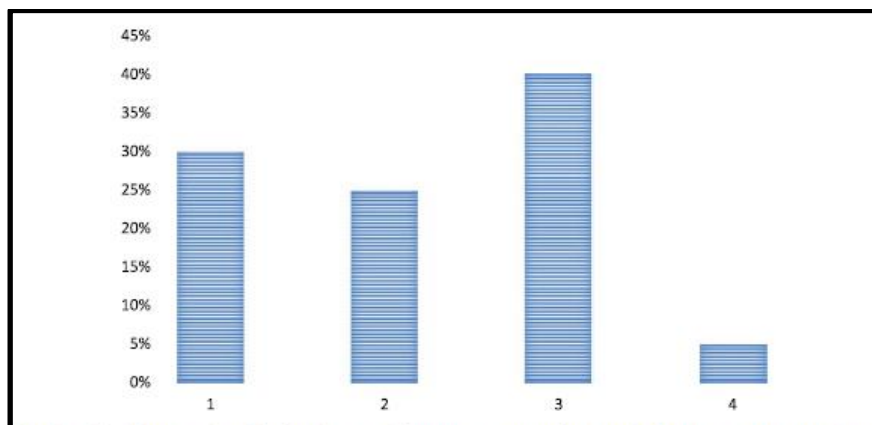


Figure 3: Prime qualities instilled in teachers by leaders, 1. Diligence, 2. Great lecture delivery, 3. More passion towards job, 4. No qualities [47]

Figure 3 shows the impact of a good leadership at different attributes in the teachers such as Diligence, Great lecture delivery, and More passion towards the job [96].

2.6. Relation between student achievement and teachers efficacy

Over the year student achievement and teachers efficacy is thought to be in a direct relation. But recently, quite a lot of researchers have stated that there is no correlation between student performance and teacher efficacy [97, 98]. According to Kim; even though teacher efficacy casts a positive impact on student achievement, but it is not in any direct association with any of the academic achievements [98]. Another research work suggested that the teacher efficacy have an indirect impact on the academic achievements as it casts a positive impact on student behavior, goal setting and motivation [99]. This teacher efficacy and student achievement show inconsistent behavior. In another research the reason behind the inconsistent results is that the context matters [100]. Since the self-efficacy is highly context-dependent phenomenon. Also that the teacher efficacy varies from situation to situation. As Tschannen-Moran and Hoy believed that teacher efficacy is highly context specific. Moreover, their scale structure explains various teaching related expertise [101]. Further research works suggested that the effect of teacher efficacy on the academic performance depends upon the work domain or the subject being taught [102, 103]. According to Wolters & Daugherty this relation also depends upon the teacher's experience [104]. As an experienced teacher will show greater teacher efficacy than an inexperienced one [105]. Furthermore, there might be other factors that will cast an impact on academic achievement of students, like previous academic achievement level and grade level [106, 107]. Apart from these school variables will also be a key factor. For example a school located in urban suburban or rural location will display different level of student academic achievements [108].

3. Methods and Materials

A combination of qualitative and quantitative research and survey methods was used to conclude about the teacher's effectiveness and commitment. The following sections will shed further light on these methods and describe the results obtained through them.

3.1. Teacher effectiveness

In order to understand the impact of teacher effectiveness the quantitative analysis method is used in this paper. Well established measurement scales were implemented in which both teachers and students participated. It was revealed that the sixth grade students and the above were perfectly able to comprehend their own statements, and were able to understand and reply to the questionnaire. Hence the students of grade six and above participated in the following research work. A total of 575 teachers and 6020 students participated in this study. A cross sectional research design was implemented, in which data was collected in two different times with a gap of six months. In one instance teachers had taught their students for two months while in the other they had been teaching them for eight months. It helped with the generalization of results. Students were allowed to answer the questionnaire in a confidential environment so that they are not influenced by the presence of their teacher [109, 110]. After the collection the data, ratings provided by both teachers and students were matched and compared. Herman's one factor was conducted on the result to check and nullify the impact of common method variances (CMV). According to the results obtained teacher's age, work experience and academic qualification were related in a vast manner with the teacher efficiency [111]. According to another research

work done by Darling-Hammond it was concluded that the degree and certification held by the teacher in their respective fields are in a significantly positive relationship with the teacher's efficiency [112]. In a similar study Rockoff approved that the teacher's experience has major say in determining the teacher's effectiveness [113]. Clotfelter in his research also demonstrated experience as one of the three major factors in determining teacher's effectiveness [114]. Based on all these researches work experience, age and academic qualifications were assumed to be controlled variables in this research about teacher effectiveness. The teacher effectiveness data shown in this research was captured by using the Toland and De Ayala's 25 item version used for 'student evaluation of teacher's rating scale' [115]. Teacher self-efficacy was also measured by using the Tschannen-Moran scale, which is a tool to measure teacher's self-efficacy. It is a three dimensional tool that includes student engagement, classroom management, and instructional strategies [116]. Composite reliability was also examined as it is perceived to be a better alternative of Cronbach's alpha. The alpha value tends to give a major underestimation of latent variables [117]. According to the results in the following research the values of composite reliability ranged from 0.909 to 0.974, proving it to be a reliable measurement technique. Apart from these discriminant validity and convergent values were also examined to evaluate teacher's efficiency [118].

3.2. Teacher commitment

3.2.1. Data sources

In order to study the teacher's commitment a combination of quantitative and qualitative analysis was implied in this research. There were two methods used in the data collection. First one was the data collection from 37 public schools for around 1400 teachers and over the course of 3 academic years. These 37 schools had participated in Teacher Advancement Program (TAP). TAP is a program that is designed to retain, attract, motivate and develop teachers [15]. For the data collection two sources were used. One was the data collection through TAP while the other was the data from a Job environment and working condition survey. These two dimensional data collection enabled the following research to analyze the relation between working condition, and teacher's commitment.

3.2.2. Analysis Method

In the following survey a mixed method approach was used. A quantitative analysis was implemented to identify relation between school characteristics and working condition, and how this relationship had affected the teacher's commitment. After completing the quantitative analysis a different approach introduced by the **Krippendorff** was applied to analyze the teacher's feedback in a qualitative manner. Ultimately the qualitative research supported the quantitative work [119]. In the research work method schools were classified into multiple categories based on multiple characteristics. Schools were characterized as 'high poverty' if more than 70% of the students had qualified for FRL (Free lunch), and 'low poverty' if they were less than 70% among the enrolled students. Similarly there were categories like 'high Hispanic students' or 'high American student enrollment' etc [15].

4. Results

4.1. Results for teacher effectiveness

Data analysis for teacher effectiveness was calculated using the structural equation modeling that implied PLS. PLS has the advantage that it enables calculating impacts of multiple variable that cause a change in dependent variables [120]. Path weighing method was used with up to 300 iterations. Bootstrapping, that is a nonparametric method was applied to check if the coefficients like outer loadings, outer weights and path coefficients were significant to check for standard errors. R2 is the most common value that is used for evaluating and measuring the structural models. The accuracy of the model in relation to principal leadership and teacher effectiveness was calculated to be 27.60. The value of predictive relevance was 0.163. The results found in this research work were in supports for model linking teacher efficacy, leadership and teacher effectiveness [6]. Table 2,3 and 4 below demonstrate these relation for the teacher effectiveness. The relationship between teacher self-efficacy and teacher effectiveness can be demonstrated from the figure 4 below.

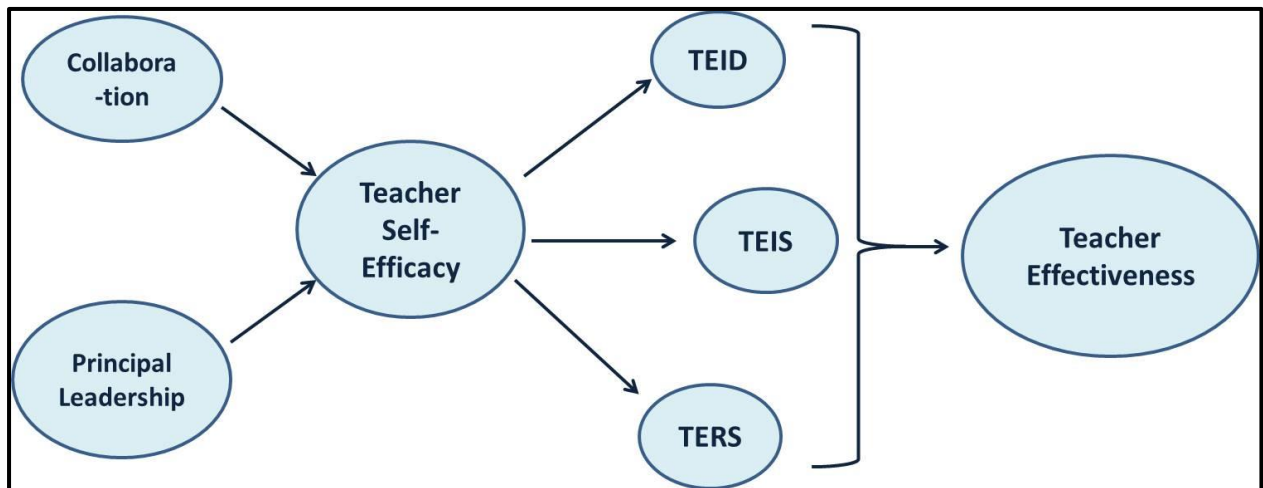


Figure 4: Relationship between teacher Self-efficacy and Teacher effectiveness [6]

Here,

TEID = Teacher’s course information delivery

TEIS= Teacher and student interaction parameter

TERS= Teacher’s role in regulation of student learning

Table 2: Relation between teachers Effectiveness and different factors[6]

Sl. No.	Variables	Mean	SD	Alpha	CR	1	2	3	4	5	6	7	8	9
1	Age	3.53	1.54			-								
2	Qualification	2.12	0.71			0.062	-							
3	Job Experience	2.58	1.43			0.83***	0.088*	-						
4	Collaboration	4.76	0.90	0.873	0.91	-0.004	0.055	-0.024	(0.667)					
5	Leadership	4.23	0.60	0.95	0.96	-0.03	-0.048	-0.053	0.408***	0.60				
6	Self-efficacy	7.74	0.97	0.94	0.95	0.069	0.025	0.037	0.407***	0.46***	(0.608)			
7	Course information delivery	4.09	0.42	0.96	0.97	0.023	-0.106**	-0.002	0.061	0.11*	0.08#	(0.754)		
8	Facilitating interaction	4.06	0.43	0.92	0.96	0.016	-0.092*	-0.003	0.063	0.10*	0.09*	0.92***	(0.74)	
9	Regulating students' learning	4.07	0.40	0.96	0.97	0.002	-0.106**	-0.017	0.071#	0.108*	0.105*	0.93***	0.94***	(0.718)

Note:

Sample size: 6020 students and 575 teachers

p<0.1 **p<0.05 ***p<0.001

Number and parenthesis in the diagonals represent the AVE scores.

SD: Standard deviation, Alpha: Cronbach alpha (measure of internal consistency).

CR: Composite reliability scores.

Table 3: Teacher Self efficacy determinants[6]

Teacher self-efficacy	Path Coefficients	T Statistics
Control variables		
Age	0.095	1.607
Qualification	0.024	0.546
Experience	-0.019	0.314
Direct effect		
Collaboration	0.260***	6.079
Principal Leadership	0.357***	7.135

Note: Number of respondents: 575

Adjusted R² = 27.60, Q² = 0.163

*p < 0.05, **p<0.01, ***p<0.001

Table 4: Teacher Effectiveness determinants[6]

Teacher self-efficacy	Path Coefficients	T Statistics	Adjusted R ²	Q ²
Delivery of course information	0.08 (ns)	1.515		
Interaction facilitation	0.091*	1.74	0.008	0.005
Regulation of students' learning	0.105**	2.43	0.011	0.007

Note: No. of respondents: 6020 students and 575 teachers, *p < 0.05, **p < 0.01, ***p < 0.001

4.2. Results for teacher commitment

In our survey conducted for teacher commitment the sample size was of 1479 teacher. The teacher retention rate

over a period of 3 years was 68.1% according to the results. Meaning that out of 1479 teachers; 1007 teachers were still working in the same place and same profession. According to the quantitated research work 70% of the teachers agreed that they were happy to be working at their school. ($M = 3.76$,

$SD = 1.04$).

As can be seen in tables below, across the different characteristic schools, the teacher commitment and retention rates didn't change significantly. It was surprising to see that at high poverty schools and high Native American schools teachers were more likely to stay as compared to low poverty school or the low Native American schools. Similarly it was obvious to see a higher retention rate for schools that displayed higher grades [15]. These results can be seen and compared in the table 5,6 show the impact of different factors that can cause an impact on teachers commitment across different characteristics schools. Table 7 displays the retention and attrition rate for different characteristics schools.

Table 5: Factors affecting teacher commitment across different characteristics schools[15]

Characteristics	(1)Time	t Statistic	(2) Facilities & resources	t Statistic	(3) Empowerment	t Statistic	(4) Leadership	t Statistic
All Schools	2.40	N/A	3.72	N/A	3.47	N/A	3.601	N/A
High poverty	2.41	0.76	3.66	3.71***	3.47	0.11	3.59	
Low poverty	2.36	2.36*	4.85	1.12	3.461		3.64	0.64
High Hispanic enrollment	2.33	2.26*	3.65	1.12	3.54	1.64	3.67	
Low Hispanic enrollment	2.43		3.721		3.44		3.58	1.48
High native American student enrollment	2.40	0.13	3.52	4.22***	3.18	5.58***	3.29	
Low native American student enrollment	2.40		3.76		3.56		3.70	6.18***
High school grade	2.38	0.88	3.77	2.35*	3.61	4.55***	3.77	
Low school grade	2.42		3.66		3.40		3.47	5.58***
High total enrollment	2.40	0.14	3.74	1.98*	3.48	0.42	3.63	
Low total enrollment	2.412		3.65		3.45		3.58	0.91

Table 6: Factors affecting teacher commitment across different characteristics schools[15]

Characteristics	(5) Professional Development	t Statistic	(6) Family & Community	t Statistic	(7) Mentoring	t Statistic	(8) Overall Conditions	t Statistic
All Schools	3.70	N/A	2.07	N/A	2.50	N/A	3.77	N/A
High poverty	3.72	1.09	2.04	3.29**	2.58	3.18**	3.76	
Low poverty	3.65		2.22		2.14		3.77	0.12
High Hispanic enrollment	3.79	2.22*	2.08	0.56	2.59	0.72	3.80	
Low Hispanic enrollment	3.67		2.07		2.46		3.75	0.68
High native American student enrollment	3.46	5.02***	1.79	7.38***	2.30	1.75	3.63	
Low native American student enrollment	3.78		2.16		2.56		3.81	1.97*
High school grade	3.80	3.19**	2.23	6.28***	2.53	0.59	3.89	
Low school grade	3.65		1.96		2.46		3.70	2.76**
High total enrollment	3.72	0.74	2.10	1.56	2.50	0.13	3.74	1.26
Low total enrollment	3.68		2.03		2.48		3.81	

Note: Constructs 1-5, where 1 denotes less satisfactory, and 5 is an indicator for maximum satisfaction, for construct six, the scale is 1-4 with 1 for least and 4 for maximum satisfaction. Similarly ‘Mentoring’ and ‘overall conditions’ are also on a 5 point scale

Table 7: Retention and Attrition rate across different schools[15]

School Characteristics	Retention (%)	rate	Attrition (%)	rate	t Statistic
All Schools	68.2		31.8		N/A
High poverty	68.8		31.2		
Low poverty	64.7		35.4		0.25
High Hispanic enrollment	67.7		32.3		
Low Hispanic enrollment	68.3		31.9		1.05
High native American student enrollment	70.2		30.1		
Low native American student enrollment	67.6		32.6		0.60
High school grade	70.7		29.3		
Low school grade	66.6		33.3		1.17
High total enrollment	69.8		30.1		3.35**
Low total enrollment	66.2		33.8		

5. Discussion

Results concluded from the teacher effectiveness research methods had two key factors known as teacher’s role in regulation of student learning, and the teacher’s role in facilitating students. The data analysis also showed a positive impact of leadership on teacher’s effectiveness. The study followed a cross sectional design. To eliminate the limitations of the collected data at two different points a longitudinal data was added in terms of student learning that helped in increasing the scope of analysis. Value addition approach might have its own

shortcomings. For example a student might not be performing well in some subjects at the point of survey and might think that the teacher is inefficient or ineffective. While later on that student is able to grasp the subject in a much better manner and think that teacher is effective now. So one further approach that can be implemented in calculating teacher effectiveness is, that the data collected from the students can be collected directly from department heads, Principals or even the parents. This will provide with a much more holistic view regarding the teacher effectiveness. However, there are multiple constraints regarding the collection of such data. For example the reports might be confidential, they might be hard to compare across different schools. Similarly a student's own level of intelligence, background, or learning ability will impact his perception about the teacher. However a large number of random samples will surely help in overcoming such interfering impacts. Similarly as far as teacher commitment is concerned the paper has provided multiple new patterns and factors that cause an impact on teacher's commitment. The working condition survey was limited to a sample of teachers that were selected in a random fashion. So it is not possible to know if some of these teachers will be movers or stayers in future. However, sufficient evidence was provided to discuss the impact of multiple factors affecting the teacher's commitment.

6. Conclusion

According to the results of this study, the collaboration between the principal's leadership and the teacher have a massive potential to influence teacher effectiveness. This work also contributes to the knowledge by confirming the relationship between teacher effectiveness and self-efficacy, which is in agreement with the previous studies [101, 121]. Results also indicated that leadership and teacher collaboration are critical in determining teacher effectiveness. This study also indicated that if schools want to increase and improve the effectiveness of their teachers, they are required to enhance self-efficacy of teachers and prioritize teacher collaboration and leadership. On the other hand there is extensive research work done on factors that have an impact on teacher's commitment. In this research work different patterns of teacher commitment and working conditions were documented. It was seen that the retention between different types of schools were almost the same in nature. According to the teachers participated in this analysis working conditions always played massive role in teacher retention and commitment determinants. Teachers felt more satisfied in schools that provided them with opportunities like mentoring professional development, leadership, and proper use of time. These results have top notch policy implications. Finally its every child's right to have quality teachers. Retaining good quality teachers in high minority or high poverty school should be a public obligation. These scenarios can be improved by teacher involvement, positive working conditions, and providing proper opportunities of professional development for teachers.

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